

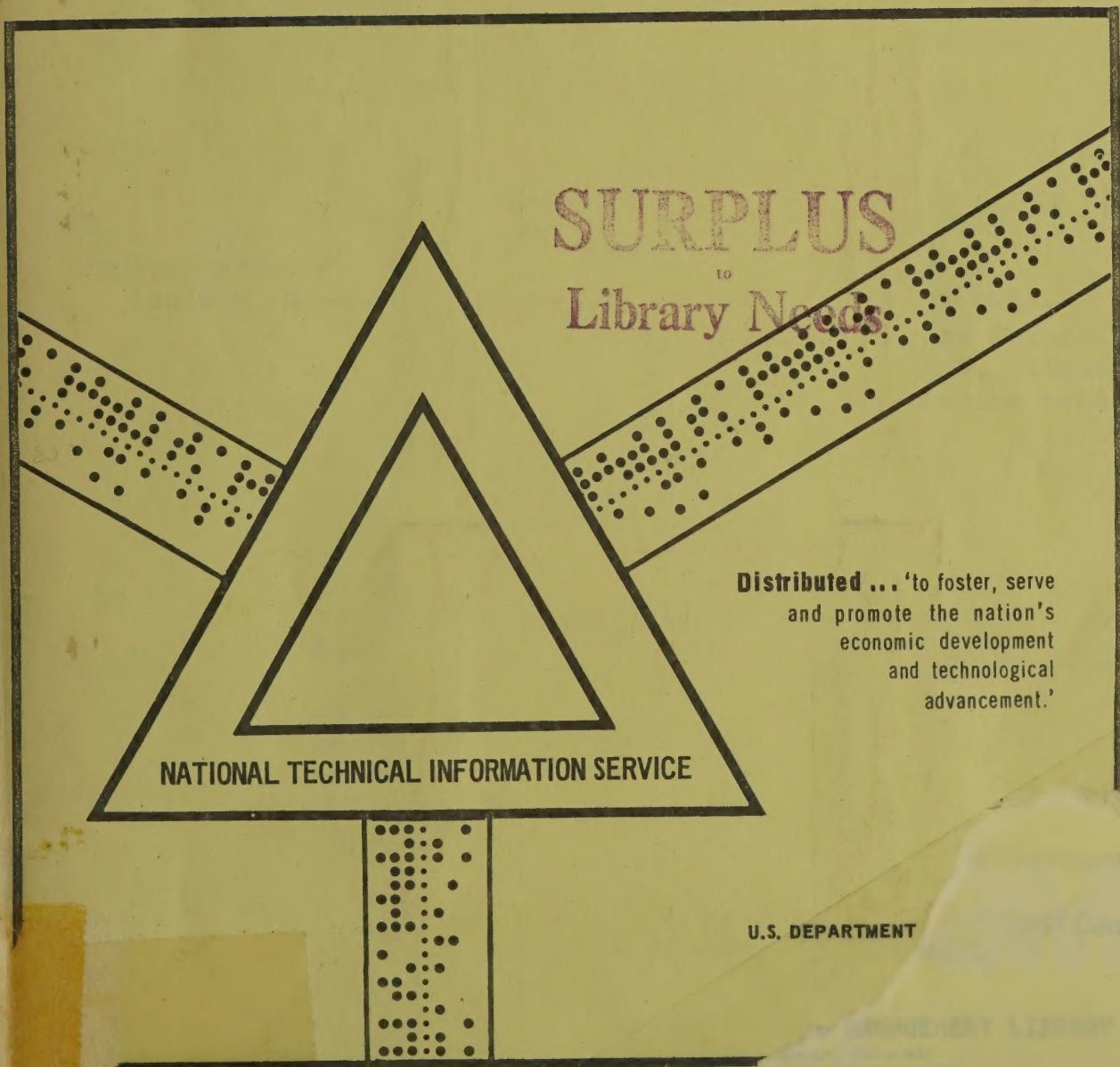


88015192

PB 194 198

INVENTORY INFORMATION ON PUBLIC LANDS: VOLUME II

Revised July 1970



HD
216
.P82
1970
v.2

LIBRARY
Bureau of Land Management
Denver, Colorado
Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225

c-1

KE
5602 Inventory information on
162 public lands.
v.2

F 5236121

C-1

ID 88015192

PB194198

Sup Only

HD

216

.P82

1970

V.2

INVENTORY INFORMATION ON PUBLIC LANDS

VOLUME II

A Study Prepared by the Staff of the
Public Land Law Review Commission
Milton A. Pearl, Director

Revised July 1970

Project Officer
Louis C. Hermel

Assisted by
Melvin Yuhas
Douglas Harnish, Jr.
Frank W. Clayton
Florentine Ford

The opinions, findings, conclusions,
and data expressed in this publication
are not necessarily those of the Public
Land Law Review Commission.

This publication constitutes only one
of a number of sources of information
utilized by the Commission in the conduct
of its public land study program.

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
Springfield, Va. 22151

Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225

BUREAU OF LAND MANAGEMENT LIBRARY

Denver, Colorado



88015192

Vol. 171-3334

TABLE OF CONTENTS

Introduction	1
I. AGENCY REPORTS AND STATISTICS PROGRAMS	2
The Function of the Bureau of the Budget.....	2
Methods Employed by Bureau of the Budget.....	3
Contributions to Statistics Programs.....	4
Public Land Statistics in Bureau of the Budget	
Directories.....	5
Responsibilities of General Services	
Administration.....	5
Federal Records Management	5
Overview Responsibilities Assigned to the	
National Archives and Records Service.....	6
The Real Property Inventory.....	7
Uses of the GSA Real Property Inventory Data.	10
Basis for Calculating Acreage and Value Data	
Supplied to GSA by the Principal Public Land	
Agencies.....	12
Federal Real and Personal Property Inventory	
Report Compiled by the Staff of the House	
Committee on Government Operations.....	17
Principal Land Managing Agencies	
Department of the Interior.....	22
Real Property Inventory.....	22
Reports Management.....	23
Bureau of Land Management.....	24
Reports Management.....	24
Real Property Inventory Data.....	25
Land Resource and Use Inventory Information..	26
National Park Service.....	39
Reports Management.....	40
Land and Resource Use Inventory Information..	41
Bureau of Sport Fisheries and Wildlife.....	42
Reports Management and Statistical Data	
Collection.....	43
Department of Agriculture.....	48
Reports Management.....	48
Real Property Inventory.....	51
Land Resources and Use Inventory Information.	51

	<u>Page</u>
Report of the Chief of the Forest Service....	52
Timber Trends in the United States.....	54
Annual Report of the National Forest Reservation Commission.....	56
National Forest System - Areas as of [June 30, 1968].....	57
The Annual Fire Report for the National Forests.....	57
Department of Defense.....	58
Reports Management.....	59
Military Functions.....	59
Real Property Inventory.....	59
Natural Resources Inventory Information.....	60
Outgrants.....	62
Civil Functions.....	63
Real Property Inventory.....	63
Other Resources Inventory Information.....	63
Outgrants.....	65
II. PUBLIC LAND SURVEY AND TENURE STATUS RECORDS.....	72
Cadastral Surveys and Land Tenure Status Records.	72
Cadastral Survey Records.....	73
Status Records.....	74
Control Records.....	75
Case Records.....	75
New Record System.....	75
Working Survey and Ownership Records Maintained by the Principal Public Land Agencies.....	77
The Bureau of Land Management.....	77
Forest Service.....	78
National Park Service.....	81
The Bureau of Sport Fisheries and Wildlife.....	82
The Department of Defense.....	83
III. AVAILABILITY OF INVENTORY INFORMATION AND THE ADEQUACY OF AGENCY DATA FOR PUBLIC LAND LAW REVIEW COMMISSION STUDIES.....	87
General Problems and Deficiencies.....	87

	<u>Page</u>
Specific Problems and Deficiencies.....	92
Acquisitions and Exchanges.....	92
Alaska.....	93
Economic Impacts.....	93
Environment.....	94
Fish and Wildlife.....	94
Forage.....	95
Future Demands.....	97
Intensive Agriculture.....	97
Land Grants to States.....	99
Minerals.....	100
Outer Continental Shelf.....	102
Recreation.....	102
Revenue Sharing.....	103
Trespass.....	104
Use and Occupancy.....	104
User Fees and Charges.....	107
Water.....	108
Withdrawals and Reservations.....	109
IV. POLICY CONSIDERATIONS AND ALTERNATIVES.....	112
Analysis of Possible Alternatives.....	113

Public Land Records and Inventory Information:
Their Compilation, Maintenance and Use

Introduction

The important statistical data on resources and uses which are available for section 10 lands are shown in **Part I** of this study. This part examines agency objectives, standards and methods for the compilation of such data and summarizes staff findings of their adequacy for purposes of the Commission's studies. It consists of four chapters.

Chapter 1 discusses the functions of the Bureau of the Budget and General Services Administration as they affect government-wide statistical activities, and describes how the principal public land agencies compile land resource and use inventory information. How public land survey and tenure status records are maintained is described in Chapter 2. Chapter 3 reviews findings of the Commission staff and some of its contractors in gathering data for studies. It describes some of the problems encountered in obtaining data, identifies principal deficiencies in the data for study purposes, and cites some of the areas for which needed data are not available. Policy considerations and alternatives suggested by problems and deficiencies identified in Chapter 3 are detailed in Chapter 4 along with the advantages and disadvantages of each.

CHAPTER I

AGENCY REPORTS AND STATISTICS PROGRAMS

The organic acts which created agencies, the various legislative enactments which have reorganized them or authorized specific programs, and the appropriation acts invariably have provided authority for the creation of records including the collection of statistics necessary for the administration of agency programs. However, there are also certain statutes which apply to statistics in particular, and to records and reports from which statistics are created which have substantially affected the statistical programs of agencies.

The Function of the Bureau of the Budget

The Public Printing and Documents Act 1/, provides in part that "A Federal agency may not conduct or sponsor the collection of information upon identical items from ten or more persons, other than Federal employees, unless, in advance of adoption or revision of any plans or forms to be used in such collection --

- (1) The agency has submitted to the Director the plans or forms, together with copies of pertinent regulations and of other related materials as the Director of the Bureau of the Budget has specified; and
- (2) the Director has stated that he does not disapprove the proposed collection of information.

Other parts of the act give the Director general investigatory and coordinating authority, and among other things provide for the designation of a single collecting agency for data required by two or more agencies and for the sharing of data by user agencies. Thus, the act has both a positive and negative or preventive objective. The positive objective is that of insuring that the informational needs of the Government are adequately met in the most efficient manner. The negative or preventive objective

1/ Title 44, USC, § 3509.

is the avoidance of duplicative, unnecessary, or burdensome reports. The latter objective is perhaps best known largely because of the notations which appear on Government questionnaires on which Bureau of the Budget approval is required. The passage of the law, initially, was precipitated during World War II by concern with the burden placed on business and the public by wartime regulations and attendant informational needs of the Government.

Although most of the inventory statistics with which this study is concerned are collected by methods not subject to Bureau of the Budget approval, the reviews which have been made in the administration of the act and the resulting changes in methods and standards have undoubtedly had a substantial effect on statistical programs throughout the Federal Government.

The Bureau of the Budget exercises influence and control over statistical data collection through its power to "issue regulations and orders for the improved gathering, compiling, analyzing, publishing, and disseminating of statistical information for any purpose by the various agencies in the executive branch of the Government." 2/

Circular No. A-46, issued on March 28, 1952, stated it would be the policy of the Bureau of the Budget, as a part of its continuing study, to issue recommendations to assist the agencies in the executive branch in establishing and improving their procedures for the gathering, compiling, analyzing, publishing and disseminating of statistical data.

Methods Employed by Bureau of the Budget

Despite the broad authorities given to the Bureau of the Budget, the methods employed have apparently stemmed from the desire to maintain only a small experienced staff of well trained persons with rather flexible duties who are assigned to priority problems. These methods include the direct transfer of responsibility for collection, preparation,

2/ Executive Order No. 10253, June 11, 1951

and maintenance of statistical series from one agency to another, the assignment of responsibility for development of a subject matter field to a particular agency, and basic guidance of the statistical program through the President's budget requests for statistics programs. In addition, the Bureau has the authority to review data requests directed to the public to assure that each request for information follows sound statistical procedures, and does not duplicate other requests.

Use of interagency task forces and consultant groups from outside Government to examine issues and determine sound courses of action for the improvement of statistics that can be supported by both the executive and legislative branches is also a function of the Bureau.

Contributions to Statistics Programs

By the use of these methods the Bureau has made important contributions to many statistics programs and areas of prime national interest. As an example, an interagency petroleum statistics study group, organized and chaired by the Bureau of the Budget, prepared a report which was concerned with the domestic petroleum industry--reserves, productive capacity, wells, deliverability, expenditures and revenues. 3/ This report laid out the general framework for a coordinated program to provide needed information pertaining to these areas and pointed up the necessity for further study required to develop the details for the program before it could be implemented. The Bureau then assigned to the Department of the Interior the responsibility for carrying out eight recommendations of the study group.

Recently, the Bureau gave technical assistance to the Water Resources Council's Task Force on Water Use Data. 4/ This task force was charged with recommending improvements

- 3/ Petroleum Statistics Report, prepared by the Petroleum Statistics Study Group, Executive Office of the President, Bureau of the Budget, March 22, 1965.
- 4/ The Water Use Data Base, the Report of the Task Force on Water-Use Data to the Planning Committee of the Water Resources Council, Water Resources Council, Washington, D.C.

in federally produced water use statistics to better serve subsequent national assessments, the planning - programming - budgeting system for water, and the comprehensive water and related land resources planning program.

Public Land Statistics in Bureau of the Budget Directories

Although both the petroleum statistics and water use data concern "commodities" producible on and important to the public lands, neither report has any specific applicability to the public lands. Further, informal inquiries of representatives of the Bureau indicate that to date no emphasis has been placed on the development of any statistics program concerned with any of the resources or uses of the public lands. The general lack of statistics relating to the public lands is further brought out by a review of the 1968 revised edition of "Statistical Services of the United States Government" prepared by the Bureau's Office of Statistical Standards (now, Office of Statistical Policy). Part I of that publication, which lists agencies by four broad categories according to statistical activities and responsibilities, makes no reference to public lands or to the programs, resources or production of public lands. Of the principal public land management agencies, only the Forest Service and the Bureau of Sport Fisheries and Wildlife are listed, along with several other agencies, as examples of agencies which produce data as a by-product of administrative operations. Part II of that publication devotes 62 pages to "principal social and economic statistical programs" without a single reference to public lands. Among the 60 pages of Part II devoted to "principal statistical publications of federal agencies" there are seven listings which can be identified by title or description with the public lands: two are issued by Forest Service, one by Bureau of Land Management, two by National Park Service, and two by the Bureau of Reclamation.

Responsibilities of General Services Administration

Federal Records Management

Each Federal agency has the responsibility for making and preserving records which adequately and properly document the organization, functions, policies, decisions,

procedures, and essential transactions of the agency and furnish the information necessary to protect the legal and financial rights of the Government and of persons directly affected by the agency's activities. 5/ Such responsibility includes maintaining a continuing records management program which provides for effective controls over the creation, maintenance and use of records in the conduct of current business; cooperation with the Administrator of General Services Administration in applying standards, procedures, and techniques designed to improve the management of records; promote the maintenance and security of records deemed appropriate for preservation; and facilitate the segregation and disposal of records of temporary value.

Overview Responsibilities Assigned to the National Archives and Records Service.

The Administrator of GSA has an overview staff responsibility, which has been assigned to the National Archives and Records Service, for analyzing, developing, promoting and coordinating standards, procedures and techniques designed to improve the management of records; to insure the maintenance and security of records deemed appropriate for preservation; and to facilitate the segregation and disposal of records of temporary value. It includes responsibility for promoting the efficient and economical utilization of space, equipment and supplies needed to create, maintain, store and service records.

GSA regulations divide the records management function into three major areas -- creation of records; organization, maintenance and use of records; and disposition of records. 6/

To assist agencies in carrying out their responsibilities, the National Archives and Records Service provides onsite evaluations of selected agency records management programs, and issues detailed standards in a series of Records Management Handbooks. It also holds formal workshops for training agency records managers, provides consulting services to Federal agencies which

5/ Title 44, USC, Chapters 29, 31 and 33.

6/ Title 41, CFR § 101-11.

request them, maintains facilities for storing and processing inactive records of Federal agencies, and acts as a central clearance point for agency proposals for the disposal of records. Onsite guidance is given by Archives personnel in identifying and safeguarding those records of continuing value which are considered worthy of eventual transfer to the National Archives.

The Real Property Inventory

The real property inventory, compiled annually by the General Services Administration, is a Government-wide inventory of real property owned by and leased to the United States throughout the world. It is compiled in two parts, one for civil agencies and one for the Department of Defense military functions. This study is concerned only with the land acreage in the United States owned by the Federal Government, and references to other realty are incidental.

The Government-wide real property inventory program was initiated and is being continued at the request of the Senate Committee on Appropriations. The General Services Administration was given authority to obtain reports from other Government agencies and departments which provide the basis for the real property inventory. 7/ GSA does not possess the authority to require other agencies to maintain real property records, however, each executive agency is required by law to maintain adequate inventory controls and systems to account for property under its control. 8/

The first inventory covered only federally-owned real property in the United States as of the end of calendar year 1953 but has since been expanded to provide an annual record of all real property owned by or leased to the United States throughout the world as of June 30 each year.

The principal objectives of the GSA real property inventory are to provide a centralized source of information

7/ Federal Property and Administrative Services Act of 1949 (63 Stat. 377).

8/ Ibid.

on Federal real property holdings; to achieve the most effective control and economical Government-wide utilization of available property, and to facilitate disposal of surplus property. It also provides a basis for the intelligent evaluation and appraisal of budgetary requirements, and establishes a ready reference for answering inquiries from the Congress, the press, trade associations, educational institutions, Federal, State and local government agencies, and the general public.

This inventory shows for each Federal installation (1) name and location - state, county, and city (except that for installations in multiple counties, counties usually are not shown); (2) acreage - whether public domain or acquired land; and (3) whether rural or urban, dates acquired, predominant use and cost of land. The current predominant use of land, building or structure determines its use classification; for example, a national forest is classified "Forests and Wildlife" and need not be separated into uses such as grazing, timber, recreation, and so forth. Installations having some excess or surplus property are so identified but without indication of the amount of surplus. The reporting agency retains accountability for excess and surplus real property until it is transferred to another Federal agency, sold, or otherwise disposed of in accordance with special legislation.

Real property is inventoried at the cost of acquisition in accordance with principles described by the General Accounting Office. 9/ No land costs are included for public domain or for historical sites acquired by methods other than purchase. Other acquired lands obtained without cost show a cost estimated at amounts the Government would have had to pay for the property if purchased at the date of acquisition.

Real property owned by the Federal Government under the legislative branch and under the Chief Justice of the

9/ GAO Manual for Guidance of Federal Agencies, Title 2, Subsection 12.5: "Accounting Principles and Standards for Federal Agencies."

United States (managed by the Architect of the Capitol) is not included in the detailed inventory but the acreage, building floor areas, and costs are shown in a summary report. Likewise, properties held in trust by the Federal Government are not included in data on federally-owned real property but the acreage and number of buildings of such property are also shown in a summary report.

Excluded entirely from the inventory are lands administered by the United States under trusteeship by authority of the United Nations, lands owned by the sovereign governments of the various outlying areas of the United States, and property owned by the District of Columbia Government. Also excluded are properties held for disposition in settlement of a claim or debt, items not considered part of the realty reported, and easements, rights-of-way and improvements to premises occupied by the Government as lessee. All lands under study by this Commission except the Outer Continental Shelf are supposedly included in the data reported by GAS annually.

Real property data on which the inventory is based are submitted to GSA by Federal real property holding agencies, in accordance with Federal property management regulations prescribed by GSA. 10/ The reporting entity for inventory purposes is an installation which may consist of land, buildings, other structures, and facilities or a combination thereof. An installation may be a national forest, a national park, a single office or warehouse building, or an unimproved site. It could include any number or combination of separated tracts. Separate reports are required for the portion of an installation in each state, but the reporting agency determines what shall be included in an installation. GSA regulations provide that reports shall be submitted by the agency responsible for the maintenance of real property records and accounts. 11/ For purposes of the inventory, the above rule applies regardless of the manner of acquisition or the agency currently using the property. In

10/ Title 41 CFR, Part 101-3.

11/ Ibid.

addition, the agency report does not include land held under permit from another Government agency.

GSA reviews agency reports for accuracy, completeness and conformance with instructions. Questionable items are resolved with agency representatives. However, GSA is not a policing agency and does not have the facilities for checking exact compliance with its regulations or the authority to require compliance from agencies.

Annual inventory reports prescribed by GSA are prepared by agencies as of June 30 each year and submitted to GSA not later than September 1 for "owned" and October 1 for "leased" real property. For the "owned" inventory, each agency reports each newly acquired or previously omitted installation, including transfers from other Federal agencies, changes in cost of \$1,000 or more affecting any line item or total for an installation, installations declared excess or surplus, in whole or in part, each disposal of a complete installation, and any substantive revision applicable to a previous report.

An optional reporting method is provided for agencies with automatic data processing facilities.

Uses of the GSA Real Property Inventory Data.

The inventory is a ready reference to all of the Government's holdings in a given area which, prior to the inventory, was not available without consultations with many agencies and onsite inspections. The real property inventory, in combination with other available data, is used in planning space needs, in promoting full utilization of available properties, to conduct property management and property accounting surveys, to evaluate budget requests for acquisition of real property, and to facilitate onsite inspection activities.

The Office of Education, Department of Health, Education, and Welfare uses the inventory to determine payments to school districts based on Federal property located in such districts. 12/

12/ "Inventory Report on Real Property Owned by the United States Throughout the World as of June 30, 1968," prepared by the General Services Administration.

The Government-wide inventory of federally-owned properties also provides a basis for analysis of the legislative jurisdictional status of Federal lands by the executive agencies. General Services Administration completed and published the first inventory report on jurisdictional status of Federal areas within the states as of June 30, 1957, and published a second report as of June 30, 1962, in October 1964. This report refines legal determinations in the original inventory and includes data on Alaska and Hawaii.

The Department of Health, Education, and Welfare and GSA also used the property report as a basis for conducting an inventory of waste water disposal practices at Federal installations. HEW applied its technical knowledge to evaluate, code, and compile the various agency reports while GSA provided administrative assistance and guidance. This report was widely used by HEW and the participating agencies in complying with various regulations, statutes, etc., pertaining to waste pollution control. In particular, it pinpointed those areas where corrective action was needed to bring Federal and state practices into agreement. 13/

The Public Health Service used the inventory in identifying Federal installations in connection with their studies on air pollution control. It was also used by the Select Committee on Government Research, U. S. House of Representatives, as a basis for a study of research and development activities in the Federal Government. The Civil Service Commission utilized the inventory to identify and solicit space in the Federal buildings at selected locations for use of voting registrars. 14/

Copies of the worldwide detailed inventory listings, arranged both geographically and by reporting agency, are on file and available for public inspection (except classified data on Department of Defense military installations) in the central office of GSA in Washington, D. C. Copies are also available in each GSA regional

13/ Ibid.

14/ Ibid.

office. Universities, libraries, trade associations, the press, and the general public continually express interest in data derived from the inventory. State and local governments have been furnished data to be used in connection with tax studies. Planning commissions use the inventory in developing proposals for tomorrow's communities. 15/

The Bureau of Land Management uses data obtained for the real property inventory each year for some of the tables on federally-owned land, which appear in its annual publication "Public Land Statistics".

Acreage data from "Public Land Statistics" and from the real property inventory were used by the Commission staff in preparation of its tables on federally-owned land. Drafts showing agency holdings as of June 30, 1966, compiled from those sources were submitted to each agency for verification and adjustment.

Basis for Calculating Acreage and Value Data Supplied to GSA by the Principal Public Land Agencies.

In an effort to determine the impact of the real property inventory on agencies, the cost of providing data for it, and its usefulness to them, a questionnaire was sent to the principal public land agencies in the Departments of Agriculture, Interior and Defense through the Federal liaison members of the PLLRC Advisory Council representing each of the departments. These agencies were the Forest Service, Bureau of Land Management, Bureau of Sport Fisheries and Wildlife, National Park Service, and, in the Department of Defense, the military departments and the civil functions of the Corps of Engineers.

The agencies were asked if the Annual Report made on GSA Form 1166 was compatible with their agency inventory, and if not, what kind of records are maintained for the report to GSA. Also, the agencies were asked to describe the measures taken to make certain that the data shown in the inventory agree with those of the agency as of the same date.

15/ Ibid.

All agencies reported that the Annual Report is compatible with their own internal records. The military departments in the Department of Defense use the alternate method of reporting to GSA by punch cards and machine listings rather than GSA Form 1166.

The next question in three parts concerned agency policy for reporting an installation to GSA. They were asked if there is a maximum on size of area for an installation or if the land area must be contiguous, and if there are any provisions for separating contiguous areas of land into two or more installations where there are differences in land classification. The answer by all agencies to all three parts was "no", but some of the agencies stated that differences in classification for an installation are reported on the single GSA Form 1166.

A third question asked for agency policy for determining the acreage of acquired lands, intermingled with public domain, that can be excluded from the report when such acreage is a relatively small portion of the total. National Park Service replied that although very few of the installations they report fall in this category, they follow GSA instructions and do not report cost of acquired lands when they are intermingled with public domain and constitute a minor portion thereof. The other agencies replied that the value is reported regardless of acreage.

The next question was designed to determine agency policy for reporting and revising cost figures for acquired land to reflect the value of the following kinds of improvements: (1) terracing, drainage, or landscaping, (2) removal of undesirable plants, weeds, weed trees, damaged or diseased trees, (3) surveys, establishment and marking of boundaries, and property corners, (4) erosion control practices, (5) tree planting, and stand improvement practices, and (6) other land improvements which enhance value. The Forest Service replied that agency accounting records include cumulative data on improvements to the forest and range land resource but that the records do not distinguish between public domain and acquired land. The increase in acquired land values from such improvements are apparently not reported on the GSA inventory.

The Bureau of Land Management indicated that it includes capitalized assets while the National Park Service practice is to report the cost of land at time of acquisition and not revise the cost for such improvements. On the other hand, the Bureau of Sport Fisheries and Wildlife generally includes costs for the itemized categories of improvements except for forestry practices and surveying activities.

The Department of Defense reported that such items are generally considered as expense items, and that land costs reflect amounts paid to owners for any and all interests.

The next question in the questionnaire concerned agency policy for checking all agency reports of acreage "owned", "administered", or "under the jurisdiction of" and seeing that they are identical to GSA inventory data for the same period. The Forest Service reported that it provides the acreage data for the National Forest System which is used by the General Services Administration and that it is not aware of an independent inventory of national forest lands performed by the GSA.

In the Interior Department, the Bureaus of Land Management and Sport Fisheries and Wildlife replied that the same source data are used for both purposes. However, the National Park Service replied that it does not compare its "Areas Administered" report with the GSA inventory because the former contains lands that cannot be included in data for GSA.

The Department of Defense pointed out that its military real property inventory data are maintained on a mechanical system so that data are converted for submission to GSA, and reviewed for accuracy, reconciled as necessary, and otherwise conformed to assure the accuracy required.

The agencies were then asked if a total acreage count was taken each year for each installation and if not, how frequently was the total acreage recounted or reestimated? The Forest Service replied that its acreage data are maintained currently and that official area reports are issued

as of each June 30. The Bureau of Land Management said that no recount frequency is established for acquired lands but that public domain estimates are made annually. The National Park Service does not take an annual count; its data are also maintained and kept current and the figures used are updated each year. The Bureau of Sport Fisheries and Wildlife replied that a total acreage inventory is made annually.

In the Defense Department, military acreage is maintained on a current basis by installation commanders and is adjusted at succeedingly higher levels, including headquarters, on a quarterly basis.

To try to get some measure of the annual cost of preparing the report data, agencies were asked to estimate to the nearest \$10,000 the cost of developing and providing the needed information to General Services Administration for this single inventory. Their estimates were as follows: Forest Service, \$25,000; Interior, \$54,000 for all Bureaus (for BLM, \$3,000; NPS, \$30,000; BSF&W, \$10,000 including preparing inventory data for the Bureau of Commercial Fisheries); Defense, \$5,500 (Army, \$2,000; Navy, \$2,000; Air Force, \$1,500).

The next question was posed to the agencies to see if the data supplied by the inventory is useful to their agency for analyzing policy and programs, program planning, budgeting, and program administration, and any other. The Forest Service indicated that the GSA report, per se, is of little use to it. The Interior Department, however, uses these data at the departmental level to analyze requirements for new holdings, plan the location of new programs, analyze the Nation's needs with regard to the establishment or relocation of laboratories and research centers, and to plan and budget for maintenance and replacement of structures and facilities. Inventory data also are used in responding to inquiries received by the Department and its Bureaus from the Congress, other Federal agencies, and the general public.

As for agencies in the Interior Department, the Bureau of Land Management finds the data useful in program planning and budgeting because it gives the location, number and

type of installations and buildings for planning maintenance programs and costs. It also provides information for general management purposes. The final print-out for the Bureau shows all real property installations (such as administrative sites, recreation areas, public domain and acquired land) in a concise and summarized format.

The National Park Service does not use the inventory data for analyzing policy and programs or for planning and budgeting purposes.

The Bureau of Sport Fisheries and Wildlife replied that it is working on an expanded cost accounting computerized system to include these data and that this inventory provides data to analyze and adjust programs as needed. It also provides data useful in planning and budgeting for maintenance and replacement of structures and facilities.

In the Defense Department, the data are utilized only for summary publications for reference purposes.

The final question provided an opportunity for the agencies to make suggestions on alternative formats or procedures that would make the inventory data more useful. However, none were made.

The replies from agencies show more uniformity than differences in the methods and procedures used in compiling reports to GSA for the real property inventory. A major exception is that of revising acquisition cost figures to reflect the value of land improvements. The Bureau of Land Management and the Bureau of Sport Fisheries and Wildlife were the only agencies to report that they include any part of the cost of improvements in values of acquired lands reported annually to GSA.

There is wide variation in the cost reported for preparing the inventory information. The low cost for the military departments is undoubtedly a reflection of the capability of their system for automatic retrieval of data from headquarters data banks. Both Forest Service and the National Park Service, who reported the highest costs, stated that the data must be supplied by their field

stations. For example, Forest Service reported that some 150 offices must participate, which makes their \$25,000 cost average out to less than \$170 per office.

There are marked differences between agencies in reported uses for inventory data. The Department of Defense, the Forest Service and National Park Service all report very little or no utility value in it. On the other hand, considerable and varied uses are being made of it at the departmental level of Interior and by the Bureaus of Land Management and Sport Fisheries and Wildlife. The Department of Defense reported that its own inventory was sufficient for both internal requirements and external information needs.

Responses from the other agencies may reflect types of organizations, nature of responsibilities, and operating methods much more than an assessment of the value of the inventory data per se. Six bureaus and services in the Department of the Interior control and manage substantial areas of Federal lands; eight other bureaus and offices have small acreages of Federal land for which they are responsible. With no central inventory for these lands it is understandable that the GSA inventory would fill many departmental needs. The Bureaus of Land Management and of Sport Fisheries and Wildlife have assigned responsibilities which extend beyond the lands under their immediate control and cut across the administrative lines of most other Federal land managing agencies. These conditions seem far more likely to require information on areas administered by other agencies than would be likely in an agency such as the Forest Service or the National Park Service.

Federal Real and Personal Property Inventory. Report Compiled by the Staff of the House Committee on Government Operations

From June 30, 1955, through June 30, 1964, the House Committee on Government Operations issued an annual, fiscal year inventory report of federally-owned real and personal property. Since 1964, the reports have been issued on a biennial basis. This inventory represents a compilation of all real and personal property owned or controlled by the Federal Government throughout the world along with an assigned value. It contains special tables summarizing

data from the General Services Administration real property inventory by state and by agency for the U. S. No breakdown is shown, however, between the acreage for acquired land and public domain lands for which no value is shown in the GSA inventory.

The objective of this inventory is to obtain estimated present day evaluations for all "zero value" federally-owned lands (including public domain and donated lands carried at nominal value). This phase of the inventory is of particular interest in connection with a study of public lands because it is the only source of value information on public domain lands. These values are furnished to the committee by the department or agency having primary administrative control over the land. The Department of the Interior is responsible for determining the value of mineral resources for all Federal departments and agencies. Estimated values for timber lands, grazing lands, and grazing rights are included in public domain data by the department or agency that has control of the properties.

Minor differences were noted for several of the agencies between the acreages of public domain shown in the GSA inventory report and in the House Government Operations report. The largest discrepancy was 370,000 acres for the Atomic Energy Commission. Table 1 shows the values per acre estimated for the land under control of the principal public land agencies as of 1956, 1960, 1964, and 1968. For some of the agencies it appears that no adjustment in land values has been made for several years.

In order to find out how these data are compiled by agencies, the approximate cost of compilation, and the usefulness of this inventory to agencies, a letter was addressed to the Departments of Agriculture, Defense and the Interior asking the following questions:

1. How are the acreage data for public domain obtained which are submitted to the Committee for this report? Are these data from the same sources used for reports to GSA?

2. What are the methods and procedures used for estimating the value of public domain? Describe specifically the policy and practice for the following:
 - a. Methods for determining the size of an area for which an estimate is to be made.
 - b. Are mineral values included and, if so, how are they estimated?
 - c. Are timber values taken into account and, if so, how determined?
 - d. What other improvements are specifically taken into account?
 - e. Are land values updated frequently to reflect changes in land prices on comparable private land?
3. What is the cost to your agency for each year for which data are supplied to this Committee, estimated to the nearest \$1,000?
4. Are the data obtained by this inventory useful to the agency for the following purposes? (Describe briefly the uses made).
 - a. Analyzing policies and programs.
 - b. Program planning, budgeting, and program administration.
 - c. Any other.
5. Have you suggestions for alternative formats or procedures that would make the inventory data more useful?

All agencies stated that the data for the two inventories are obtained from the same sources. The Department of the Interior and the Forest Service (answering for the Department of Agriculture) both

Table 1. Estimated Average Value of Public Domain Land
in the United States Administered by Principal Public Land Agencies ^{a/}

Agency and Date	Acres (thousands)	Estimated Value of Land (\$1,000)	Average Value Per Acre (dollars)
<u>Agriculture</u>			
6/30/68	160,985	6,594,001	\$40.96
6/30/64	160,460	6,565,083	40.91
6/30/60	160,332	6,562,599	40.93
6/30/56	160,354	6,543,000	40.80
<u>Interior</u>			
6/30/68	520,938	8,900,321	17.09
6/30/64	538,640	6,487,685	12.04
6/30/60	540,884	3,759,471	6.95
6/30/56	518,830	2,670,771	5.15
<u>Army</u>			
6/30/68	7,346	75,521	10.28
6/30/64	7,238	74,554	10.30
6/30/60	3,774	61,425	16.28
6/30/56	3,494	66,460	19.02
<u>Navy</u>			
6/30/68	2,261	81,114	35.88
6/30/64	2,174	80,399	36.98
6/30/60	2,243	80,996	36.11
6/30/56	2,255	82,041	36.38
<u>Air Force</u>			
6/30/68	6,937	23,161	3.34
6/30/64	7,103	23,416	3.30
6/30/60	10,660	34,108	3.20
6/30/56	11,648	32,313	2.77
<u>Corps of Engineers</u>			
6/30/68	861	12,929	15.02
6/30/64	802	11,497	14.34
6/30/60	785	10,311	13.14
6/30/56	530	10,109	19.07

a/ Alaska included for all years.

Source: Acres and estimated value of land are from Federal Real and Personal Property Inventory Report (Civilian and Military) of the U.S. Government Covering its Properties Located in the U.S., in the Territories and Overseas as of June 30 (for years indicated).

responded to question 2 by forwarding copies of their 1956 instructions for estimating the value of public domain land. Interior's instructions are general policy guides to all bureaus for estimating values of public domain lands only. Reported values were to be the current estimated market value as of June 30, 1956, including, but not reported separately, surface resources and those "improvements" for which the cost had not previously been reported under buildings, other structures, and facilities. "Improvements" were defined as meaning range, soil and moisture, or similar type projects. Valuation procedures were to follow standard appraisal methods, using both the market data and capitalization of returns methods, but were not contemplated to entail the systematic collection of value data at the field level. No statement was made regarding the updating of values, but it is apparent from Table 1 that adjustments have been made by some bureaus.

Forest Service instructions are rather detailed procedures for "classification and evaluation" of all federally-owned lands administered by the Forest Service as of June 30, 1956. A report form provided for classifying administrative areas, separately by public domain and acquired land, into five land classes; commercial forest land, grazing land, recreation and wildlife land, special purpose land, and other. The average value estimated for each land class was to be a current market or commercial value, using as a test of market value, the cost price that a willing buyer would pay a willing seller, both reasonably informed as to the facts.

The Forest Service reported that regional work conferences were utilized to obtain uniformity of data between units. Also, that data are updated for subsequent reports by inserting current acreage figures from the National Forest Area report. Apparently, no adjustments have been made in valuations since 1956.

The Department of Defense reply was rather noncommittal but did state that appraisals are determined on the basis of comparative value of surrounding public domain and are developed in consultation with the Bureau of Land Management supported where possible with internal appraisal as necessary. Land values are adjusted annually as required to reflect

trends and changes in marketing conditions. The average costs in Table I hardly seem to support this statement.

The Department of Defense estimated the total cost of preparing this report at \$3,700, Department of the Interior \$15,000, and the Forest Service reported that the cost "is nominal as the data are available in connection with regular area reports."

None of the agencies reported any useful purpose for this inventory and there were no suggestions for making it more useful.

Principal Land Managing Agencies

This section examines the provisions for the compilation of land resource and use inventory information for the principal land management activities in the Departments of the Interior, Agriculture, and Defense, which together managed 99.8 percent of section 10 lands, as of June 30, 1968.

Of the ten Federal agencies which administered the other 0.2 percent of section 10 lands, six had less than 2,500 acres. Only the Atomic Energy Commission (with 1.4 million) and the Department of Transportation (with 126,000 acres) administered more than 13,000 acres.

Department of the Interior

The Department of the Interior administers the largest portion of section 10 lands; nearly 522 million acres. Three bureaus, the Bureaus of Land Management and Sport Fisheries and Wildlife, and the National Park Service, administer nearly 97 percent of this acreage.

There are two department-wide functions, under the Assistant Secretary for Administration, which relate to the compilation of inventory information: Real Property Inventory and Reports Management.

Real Property Inventory

The Office of Management Operations, under the Assistant Secretary for Administration, serves as

departmental liaison with GSA for the real property inventory. This office coordinates the reporting functions of the various landholding bureaus and offices and submits annual reports to GSA.

Reports Management

It is the policy of the Department of the Interior that no bureau or office will require any report from the general public or from any other Federal bureau or office, in or out of the Department, unless the information to be reported is required by law, requested by responsible authority outside the Department, or urgently needed by the requesting office to plan or appraise required programs. 16/ No operating reports will be required unless urgently needed to plan or appraise an operating program, and the cost is justified by the need. Also, the urgency and costs of a report from the public are to be evaluated in relation to the use of its data to plan or appraise required programs.

Although each requesting office is responsible for observing Department policy and standards, the Office of Management Research, in the Office of the Assistant Secretary for Administration, is responsible for the reports management program in the Department and for its liaison with the Bureau of the Budget. Agencies and offices are authorized to deal directly with the Bureau of the Budget to eliminate or reduce any previously cleared report. New or expanded public reports, however, are to be forwarded for review through the office of the appropriate Assistant Secretary to the Office of Management Research for approval before forwarding them to the Bureau of the Budget. Agencies are not required to initiate a reports management program.

Reports to the public are also subject to the standards of the Bureau of the Budget and are to be continually reviewed in an effort to reduce their number. Those reports required by law are reviewed annually by the Office of Management Research to appraise the continuing need and pertinency of the report and the burden placed on the preparing office. Recurring administrative reports are subject to continuing review by the Office of Management

16/ Department of the Interior, Departmental Manual, Part 305.

Research to determine that only reports needed in connection with review and control of administrative operations and to meet external requirements are requested.

Bureau of Land Management

In 1968, the Bureau of Land Management (BLM) administered nearly 466 million acres of section 10 land and about 4-1/2 million acres of other federally-owned land. Although it is the largest land administering agency, BLM considers that it has a limited statistical data collection mission, and that data collection is based on the need for information to carry out its resources management and disposal responsibilities. In addition, the BLM reports that it has no data collection programs for repetitive periodic or a periodic response to the general public or to special users. All data are sought on a voluntary basis except in connection with individual applications for permits, rights, or privileges.

Reports Management

The Chief of the Branch of Records and Reports, Division of Records System, directs the reports management program. This program provides for review of proposed new reports or revised existing reports for conformance to reporting standards and nonduplication of required information. It also provides for follow-up review of other than one-time reports to determine the need for continuing them and opportunities for improvement or simplification. In addition, it provides for the maintenance of a central information inventory on reports required.

In conjunction with its directives management operations, BLM has a forms management program that provides for the analysis, design, and control of forms to facilitate the reporting, accumulating, consolidating, and retrieval of technical and administrative data.

Forms are developed from information supplied by subject matter technicians (i.e., forestry, minerals, lands, etc.) to improve the Bureau's system and procedures of which forms are a part.

Forms management includes the design of forms in accordance with modern day professional concepts and methods to simplify reporting and the attendant paperwork processing. The forms office and computer center work together to produce computer support forms which are designed for data processing. Bureau of Land Management currently has underway an intensive staff analysis to identify needs and opportunities over the next several years for the development and use of additional electronic data processing supported systems and applications. The schedule in October 1969 was to complete the analysis and place the results before top Bureau management for decision before the end of 1969.

Analysis of future electronic data processing requirements has identified need for a comprehensive land and resource management data system to support all BLM program responsibilities. Such a system would include basic ownership and status information, keyed to the rectangular survey grid, lands and resource inventory and use data, keyed as appropriate to ownership, and provide not only for storage and retrieval of data, but also for its analytical manipulation to meet BLM's management needs. It would also have the capability to produce outputs in either statistical or graphic form, and yield, as by-products, data of the kind now included in Public Land Statistics. Refinement, expansion, faster publication, or other improvement of the Public Land Statistics type data could be expected.

Another system under study is a case management and control system that would replace and improve upon existing manual case reporting to include data not now accumulated, such as acreages, final disposition of cases, and for those rejected, the reason(s) therefor. In addition, it would have the capability for analytical manipulation of case-related data as a tool in evaluating or predicting results and impacts of public land laws and implementing Department regulations from the standpoint of the Federal, State or local Governments, or the public. It would also provide input for improved workload analysis as well as faster and improved input for Public Land Statistics-type statistics.

Real Property Inventory Data

Bureau of Land Management Service Centers at Denver and Portland prepare General Services Administration forms

for buildings, facilities, and administrative sites from detailed property records maintained in these offices. Forms for other land acreages (public domain and Land Utilization Project acquired land) are prepared (one for each applicable state for which the acreage has changed from the preceding year) in the Administrative Services Division in Washington, D. C., from acreage data reported by land offices located in BLM state offices. Records for most Western States not having a BLM state office are maintained by the land office in an adjoining or nearby state; those for Louisiana, Arkansas, Missouri and Iowa and for the Eastern States are serviced by the Eastern States land office in Silver Spring, Maryland.

The Administrative Services Division is responsible for reviewing all GSA forms and transmitting them to the Departmental Office of Management Operations.

The acreages of public domain reported to the House Committee on Government Operations, currently in alternate years, are from the same sources and identical to those furnished GSA. Land values for public domain required for that report are obtained by a desk evaluation using a real estate appraisal concept which includes different sets of values within a state due to several different types of land, i.e., range land, woodland, etc. The collective evaluation of these different types of land produces the total state valuation of the public domain land. 17/

Land Resource and Use Inventory Information

The Office of Information (Washington Office) is responsible for dissemination of information about BLM programs, activities, and responsibilities. However, the provisions of the reports management system extend to all offices of BLM, headquarters and field. Service Centers and State Directors may develop subsidiary reporting systems reflecting needs of their organization.

17/ Letter of December 30, 1969 from Assistant Director, BLM, to the Director of Management Operations, USDI.

State and District Offices and the Service Center Divisions of River Basin Planning are responsible for collecting, maintaining, and disseminating land resource and use information for their geographic area of responsibility. 18/ Service Center and State Directors manage and review reports requested by their offices, except feeder reports used to prepare information for reports requested by Washington Office.

The Division of Records System is responsible for compiling and maintaining land resource and use information on a Bureau-wide basis and for disseminating it in response to requests from sources outside BLM.

The principal statistical reporting program of the Bureau is the collection and publication of data about its programs and operations in Public Land Statistics which is published annually by this Division. Prior to 1962, the data appearing in this publication were assembled as an appendix to the Bureau's annual report to the Secretary of the Interior and before that in the report of the Commissioner of the General Land Office to the Secretary.

Public Land Statistics for 1968 contains 128 tables grouped into 11 parts. Six tables in Part 1 are borrowed from sources other than BLM. Table 1 comes from the 1960 decennial census which shows the acreages of land and inland water for states and U. S. possessions. Tables 7 through 10 are from GSA data and show acreages of federally-owned land by type of acquisition, by state and by administering agency. Table 12 is from the Forest Service and shows the area of National Forests for 1968.

Of the remaining 122 tables, one covers a period prior to this century, 14 are for calendar year 1967, and 107 indicate the data are for, or include, 1968, although for at least one table the last activity was prior to 1968. In most of the 1968 tables there is nothing to indicate whether the data are on a fiscal or calendar year basis. However, BLM officials stated that all data are for the fiscal year unless otherwise stated.

18/ Memorandum of October 28, 1969 to the Solicitor from the Assistant Director, Bureau of Land Management, Enclosure II.

Officials of BLM state that these data are the by-products of operating records and administrative reports and that none were developed especially for publication. Much of the data are more adapted to measuring, supervising or monitoring day-to-day operations than for purposes of inventorying the resources and uses of the public lands. However, no effort has been made to classify tables or portions of tables for such different purposes.

Because "public lands" do not have the meaning in Public Land Statistics as in the legal definition in section 10 of Public Law 88-606, the use of the term is somewhat confusing, and more nearly means "BLM administered lands".

In collecting materials for publication, prepared forms in table format are provided to the BLM state offices which are responsible for the preparation of that portion of each table applicable to the state, including adequate explanatory footnotes. These completed forms are given a mathematical check and reviewed for completeness and reasonableness by the person who is responsible for combining them and preparing tables for printing. There is no overall review of the table drafts by specialists in the various commodity areas before they are printed. With the volume of laws that affect the operations which produce these data, simple tables cannot always be expected. However, several tables have a substantial number of explanatory notes, and a few would require supplemental tabulation to abstract many items. A critical review and analysis of each table by a program specialist could result in a more effective presentation.

Each part is introduced by a brief description of BLM responsibilities or objectives for programs included in the part, and contains a short narrative summary of the annual accomplishments. Also included are definitions of terms which are used in the part, except for Part 9, "Resource Conservation and Development".

Part 1, titled "The Federal Lands", is concerned largely with the acreage, location, and agency responsibilities for Federal lands. It also includes data from other agencies, (Tables 1, 7 through 10, and 12) as

discussed earlier. Table 2 summarizes data on acquisition of the public domain between 1781 and 1867 which comes from a Department of the Interior publication printed in 1922. This information is also depicted on a map of the United States which appears on the page facing Table 2.

Table 3 is a "broad brush" picture of the disposition of public lands, 1781-1968. Acreages, in multiples of 100,000 are shown for nine types of dispositions, including grants to states which are further subdivided into seven categories of purposes. There is a note that data are "estimated from available records", but there is no explanation that acreage listed for "grants to states" (Table 4), "grants to railroads" (Table 6) and "original and final desert land entries" (Table 26) comprise the "available records" for nine of the items. Data for the other six items do not appear in the publication. There is no footnote which explains that the acreage granted to railroad corporations includes revested lands. The purposes for which grants were made to states from 1803 through 1968 are shown in Table 4 but the nine purposes shown are not the same as those shown in Table 3 on the facing page. Table 5 shows, by state and purpose, the grant lands confirmed to states in 1968. Acreage granted to railroads, by state, 1850-1968 is shown in Table 6. Data for Tables 3 through 6 originated in the land office records of BLM state offices.

Public Lands Under Exclusive Jurisdiction of the Bureau of Land Management, 1968 (Table 11), is a detailed summary, by state, of BLM lands separated into the following categories: (1) vacant public lands, outside grazing districts and within grazing districts, (2) reserved lands, separated into L.U. (Land Utilization Project) lands and other, and (3) unperfected entries pending. Neither the L.U. lands (2,389,652 acres), the O&C lands (2,071,434 acres), nor the Coos Bay Wagon Road lands (74,547 acres), are section 10 lands. Some of this information originates in district offices and the rest in the land office records of state offices. Not listed in this table are approximately 23 million acres in Alaska described as Naval Petroleum Reserve No. 4 (section 10 lands) which are included for BLM in the GSA real property inventory for 1967 and 1968, and in Tables 8, 9, and 10.

Part I is a mixture of somewhat confusing information. Tables 4, 5 and 6, with details of land management operations, should probably be in Part 2. Tables 9 and 10 on federally-owned land seem to provide more information than they actually do; Table 10 could be dispensed with since it only duplicates part of the data in Table 9. Some confusion results because these tables are a year earlier than Tables 11 and 12. It would be most helpful if GSA could arrange to provide these data directly from the computer so that current year information could be used since they are so useful to anyone with an interest in the administration of the Federal lands.

Users of the data would no doubt appreciate the use of identical language for the same items on different tables. This is quite noticeable for Tables 3, 4, 5 and 6; although it does occur for tables in other parts also. For example, "reclamation of swamp land", "swamp reclamation", and "swamp grants" apparently refers to the same purpose just as "support of common schools", and "common schools". Also, there seems to be no compelling reason why grants to states should be divided into seven categories on Table 3 and into nine categories on Table 4.

For tables which include the current year in a time series, a separate column could be shown to inform the reader of this new information, and in such tables where current activity is unusual (such as Tables 3, 4, and 6) it should be explained by footnotes. Most users are confused by the 100 million acres added without explanation to Tables 3 and 4 for 1968, as well as the numerous small additions in recent years to Table 6, Grants to Railroads.

Footnotes such as Number 2 in Table 11, "Data are incomplete", leaves something to be desired. The same is true for the explanation in footnote 6 that approximately 23 million acres are excluded from Table 11 for Alaska, especially since the real property inventory of GSA for 1968 includes these acres for BLM.

Part 2, entitled "Lands" deals with the acreage of patents which transferred land from Federal ownership, land use leases and permits, withdrawals and revocations, land exchanges, and land investigations and classifications. Of the 23 tables in this part, 18 contain data about land

entries, selections, approvals, patents issued, or unperfected entries pending. All tables include actions through 1968, however, Table 27 which summarized stock raising homesteads since 1917, indicates that the last activity was recorded for 1966.

There are separate tables for land exchanges, withdrawals and revocations, and miscellaneous leases in force. Table 30 covers special land use permits in force in 1968 including the number of free use permits, the number with rental charged, and the total value of such rentals for each state. This is the only table in Part 2 that includes data originating in district offices. Data for all other tables came from land office records in the state office.

Activity under the Mining Claims Occupancy Act is shown by state in Table 34 for petitions and applications pending at the beginning of the 1968 fiscal year, those filed separately by the agency administering the land, actions taken, and the number pending at the end of the fiscal year.

The table in this part, Table 35, reports public land investigation and classification in the Missouri River Basin Project. The acreage of land classified in 1968, from state office records, has been added to the totals and shown by unit.

Part 2 provides a great deal of useful information about the transactions in 1968 under the various land laws which permit entry, lease, or other uses of Federal public domain. Data for Table 18 covering minerals reserved to the United States would be much more informative if it could be shown by state, at least in total and for the current and one prior year. The title for Table 35, "Public Land Investigation and Classification - Missouri River Basin Project, 1968", is misleading, indicating that it represents activity for 1968 only, which is not supported by the note below the table, or by prior publications.

The third part of Public Land Statistics, "Outdoor Recreation and Wildlife", added to the publication in 1964, contains data on BLM activities that protect, preserve,

develop and manage public land resources valuable for outdoor recreation and wildlife. The first table, No. 36, summarizes Recreation and Public Purposes Act leases in force for recreation and wildlife purposes in 1968. The number of leases, acreage, and annual rental is shown for each state, grouped according to whether they are leases to a state, county, city, or to a nonprofit organization. These data are supplied from land office records of BLM state offices.

Data for the other nine tables in this section originate in district offices. These show by state the recreation sites administered, acreage of natural lakes and reservoirs available for water based recreation on public lands, and recreation visits and visitor days on public lands under BLM jurisdiction. Outdoor recreation inventories completed in 1968 and to date are shown, along with the estimated miles or acreage of fishing streams, lakes and reservoirs on public lands, 1968.

There are three tables devoted to wildlife; one showing the waterfowl habitat on public land, another the acreage of important big game habitat and the third showing the estimated number of big game animals that used public lands.

All tables in this part contain current information; all but one are based on 1968 fiscal year information; Table 45, showing numbers of big game animals, is for calendar year 1967.

The tables in Part 3 provide important information on recreation and wildlife facilities on BLM lands. However, Tables 42, 43 and 44 would be more informative and useful if columns were added to show additions in 1968. This would be useful information even though there may be no additions for some of the tables.

Part 4 of this publication, "Minerals", contains 13 tables related to the administration of public mineral resources of the United States. These resources are on Federal lands and patented lands, on which minerals were reserved to the United States. Tables 46 through 48 and 53 through 56 provide data by state on mineral patent applications and patents issued, permits and licenses, and mineral leases issued. Data for these tables came from land

office records in BLM state offices. Tables 49, 50, and 52 present data on mineral production from public lands, acquired lands, military and other Federal lands and are supplied by the Geological Survey. Mineral leases and production on the Outer Continental Shelf are shown in Table 51 with production data provided by the Geological Survey and lease data provided by Outer Continental Shelf offices.

"Disposition of Materials Other Than Vegetal, 1968", reports dispositions by state for each material, number of sales, quantity and value in Table 57. These data are supplied by BLM district offices. Table 58, "Activity in Mining Locations Under Public Laws 167 and 359, 1968", contains data from land office records of the state offices and shows, by states, the area published to June 30, 1967, area published during 1967, number of verified statements, and number of claims for Public Law 167; and the area examined in acres, number of claims examined, number of certificates filed, and the number of labor affidavits filed, by state, separated for Forest Service and BLM, under Public Law 359. The information for minerals in Part 4 appears as complete as could be expected in a general publication of this kind.

"Adjudication, Appeals, Classification and Investigation and Hearings" in Part 5 consists of adjudication operations started and determinations made for each of the activities identified in the title. Six tables, 59 through 64, involve adjudication cases received, reactivated, closed, and unclosed, with a table summarizing operations by state and one containing a summary by type of case. Data involving these cases may have originated in the land office or other records of the state office, the district office or the Outer Continental Shelf office, depending on the type of case, its location and whether or not field investigation was required. Table 65, "Appeals to the Director, 1968", contains data which originated in the office of Appeals and Hearing (Washington Office) and is a summary of cases pending, new cases received during the fiscal year, cases disposed of, and those pending as of June 30, 1968 by type of case.

Tables 66 through 70 are concerned with classification of lands suitable for disposition under the Taylor Grazing Act, those not suitable, and lands classified under miscellaneous laws. Tables 69 and 70 summarize operations by state and by type of case. These data originated in the district offices or the state office, depending on the type of case and the technical personnel available in a particular district for necessary investigation.

The last table in this part, No. 71, "Bureau Proceeding Requiring Formal Hearings, 1968", contains data from the Office of Hearing Examiners. Cases are summarized by type of proceedings, number of proceedings and number of claims, for unclosed proceedings at the beginning of the fiscal year, new proceedings referred for hearing during 1968, those closed by hearing examiners, and proceedings pending June 30, 1968. Also included are the number of proceedings heard along with number of claims or entries affected during 1968.

Although quite important to budget presentation and in evaluating program acceptance and administrative effectiveness, the data in Part 5 provide little or no resource information.

Included in Part 6, "Public Land Surveys", are two tables which summarize the land surveyed in public land states, and cadastral survey actions completed in 1968. Table 72 shows the acreage surveyed and unsurveyed to date, by state. Survey actions completed during fiscal year 1968 for each Federal agency and for others is shown in Table 73. These operations are listed separately by original surveys, resurveys, miles of line surveyed, and monuments set. Also shown by states are the number of plats accepted, protraction diagrams approved, and the number of mineral surveys by type. This table contains 58 footnotes, several of which consist of four or more individual items. These data are supplied by the Division of Cadastral Survey in BLM state offices.

Part 6 contains a great deal of information on public land surveys. Table 73, however, is so overloaded by its 58 detailed footnotes that anyone using it would have to retabulate data in order to get much useful information

from it. Summary tables for a half-dozen of the agencies which appear most frequently in the footnotes would eliminate much of the confusion and make the data much more meaningful.

Part 7, "Forest Management", presents information on the area and productive capacity of forest lands administered by BLM, sales and other dispositions of forest products, and forestry conservation practices accomplished. Table 74 shows the acreage of commercial forest land and woodland, standing volume, and annual producing capacity by state. This information originates from forest and woodland inventories in the district offices.

Categories of revested O&C Railroad and Coos Bay Wagon Road grant lands are shown on Table 75, by county, identifying those administered by the Forest Service. These data originate in the state office.

Table 76 reports the acreage, forest cover, allowable cut, and annual sales by district and master unit for Western Oregon lands for 1968. A map on the facing page shows the location of Federal forest lands in Western Oregon but is reduced too much to be fully legible.

The next ten tables, 77 through 86, deal with the disposition of timber products by sale and free use permits. Data are included by states for timber species and products removed. This information is developed by the district offices and is compiled by automatic data processing at the Denver Service Center.

The last two tables in this part, Nos. 87 and 88, report forestry conservation accomplishments in 1968 by states, broken down between those completed with BLM appropriated funds and those completed by timber sale purchasers. These accomplishments include direct seedings, the acreage treated to date and that treated in the current fiscal year (Table 87). It is not clear whether baiting (to protect the natural seed fall) is for 1968 or accumulative.

The information in Part 7 provides quite useful information on forest resources. It would be more useful if comparative data for the prior year and cumulative data for

several years could be included with current data for at least some of the tables.

Part 8, "Range Management", summarizes grazing use of range land administered by the BLM. Data for all ten tables in this part are supplied by BLM district offices; Table 89 is for fiscal year 1968 while the others are for the 1967 calendar year. Six of these tables deal with grazing activities within the grazing districts established under the Taylor Grazing Act. "Area and Status of Land Within Grazing Districts, 1968" (Table 89), shows by state, the acreage of public lands, other federally-owned lands, and non-Federal lands which are administered by BLM. The next five tables show by state the permitted grazing use of lands, number of operators, number of livestock (cattle and horses and sheep and goats), and the animal unit months of use. Also shown are number of permitted livestock, by type of permit and the animal unit months, for cattle and horses and sheep and goats by type of permit.

Tables 95 and 96 deal with grazing lands that are leased outside grazing districts. They show by state the number of operators, number of animals using the lands, and estimated actual use and capacity available in animal unit months. Also shown by state are the number of grazing leases in force, the acreage, and annual rental.

"Estimated Use of Grazing Lease Lands, Alaska, Calendar Year 1967" (Table 97), gives the number of operators, number of cattle and horses, number of sheep and goats, and the estimated actual use and capacity available in animal unit months. Table 98 gives the estimated use by reindeer of the BLM lands in Alaska.

Statistics for Part 8, "Range Management", are limited to animals that use the range and a couple of items showing the number of operators. Information on the grazing resource itself would be most useful, both with respect to acreages available and indications of the productiveness or carrying capacity of range areas. Also, it would be most informative if data on grazing leases (Table 96), for prior years were included, and if the number of operators could be included for each year.

"Resource Conservation and Development", Part 9, summarizes BLM's soil, watershed, and range improvement conservation program accomplishments, and was added to the publication in 1966. All data are for 1968 and originated in district offices. These data show the units of practices performed by states, with kinds of practices subdivided under the major categories of soil stabilization and improvement, water management, and program facilities. One table is devoted to soil and watershed conservation programs accomplishments, another to public range improvements, and a third to private range improvements constructed on public lands. The fourth table summarizes the accomplishments itemized in the preceding three tables.

The data in Part 9 would be more meaningful and useful if there were comparative tables with resource conservation and development accomplishments for at least one prior year, and accumulative totals for several years.

Part 10, "Protection: Fire and Trespass", summarizes the acres and type of protection provided for both fire and trespass. For example, Table 103 shows acres burned and value of resource damaged by fires on or threatening lands administered by the BLM. Information is by state and by forest and nonforested area. Table 104 shows fires suppressed on BLM lands by state, by class of fire and by cause of fire, for lands protected by contract and by fire protection forces supervised by BLM. A summary of all fires suppressed and protection costs by BLM supervised operations and by contract account is shown in Table 105. Table 106 shows, by state and by cause, the number of fires, acres burned and dollar damage on BLM lands. These four tables are for calendar year 1967; the others in this part are for fiscal year 1968.

Information in Table 108 shows the number of trespasses by state, for seven types of trespass cases which were pending July 1, 1967, which occurred during the fiscal year, the cases closed, and those still pending July 30, 1968. Table 109 shows the number of trespasses, the volume of timber cut in trespass and the value of nontimber forest products by state. In addition, Table 110 provides this information for timber cut in trespass in Western Oregon. The last table (No. 111), shows collections for trespass

in fiscal year 1968 by type of trespass by state. Data originated in district offices for all tables in Part 10, but some of the information in 103 through 107, dealing with fire protection, was provided by state offices. Data for Tables 109-111 are compiled by the Denver Service Center.

Information on "Protection: Fire and Trespass" would be more meaningful if the tables were expanded to include information on prior years for current year comparisons.

Part 11, "Administration and Finance", summarizes in 17 tables the financial transactions of BLM during fiscal year 1968. Portions of the data originate in all BLM offices, including those for the Outer Continental Shelf. The first table (No. 112) concerns obligations incurred in fiscal year 1968 by BLM from appropriated funds and those from appropriations transferred from other bureaus and agencies to BLM. The next seven tables, Nos. 113 through 119, report receipts from mineral leasing on public domain and acquired lands (including bonus, rents, and royalties on the Outer Continental Shelf), sale of timber (including O&C timber sales), and from the sale of public lands. Also included are receipts from grazing leases, licenses, and permits, fees and commissions, rights-of-way leases, and from various miscellaneous sources. Receipts are shown by state, in dollars, and identified by source.

Tables 120 through 127 list allocation of receipts. The percentage disposition required to be made of each source of receipt is summarized in Table 120. Table 121 shows the allocation of BLM receipts for fiscal year 1968 by source of receipt and by recipient, while Table 122 shows allocation of BLM receipts to states by source of receipts. Allocations made to states out of receipts for public land sales from March 3, 1803 through June 30, 1968, is reported in Table 123 by state with allocations for each of the years 1967 and 1968 shown separately. Table 124 shows allocations of receipts to states from mineral leasing acts from 1920 to 1966 with allocations for each of the years 1967 and 1968 again presented separately. The cumulative allocation to states of section 3 and section 15 Taylor Grazing Act receipts from 1934 to 1966 is shown in Tables 125 and 126 with allocations shown separately for fiscal years 1967 and 1968.

Table 127 shows allocations made to Oregon and Washington counties from revested Oregon and California and reconveyed Coos Bay Wagon Road land grant funds from June 8, 1916 through June 30, 1966, showing allocations made for each of the years 1967 and 1968 separately.

The final Table 128, in Public Land Statistics, lists the amounts credited to the reclamation fund from public land sales and timber sales for fiscal years 1901 through 1966, in addition to separate listings for 1967 and 1968.

All data for transactions reported in Part 11 are processed by ADP equipment at the Denver Service Center but the format of tables used in Part 11 required that the data be summarized manually by the Washington Division of Finance. Recent changes, however, will allow the data for these tables to be programmed for ADP before the end of this fiscal year.

National Park Service

In 1968, the National Park Service (NPS) had primary responsibility for administering about 18.5 million acres of section 10 lands and nearly 4.7 million acres of other federally-owned land. In addition to Park Service lands, it administers substantial areas under cooperative agreement for other Federal agencies and cooperates with states, municipal subdivisions, corporations, associations or individuals in the operation, protection and maintenance of non-Federal park lands. This agency reported total gross area administered at the end of 1968 of 29,117,421 acres, including 1,146,572 acres of non-Federal land.

These lands comprise 273 areas of 23 different types which are grouped under three management categories, historical areas (167), natural areas (70), and recreational areas (36). Since the operating authority for each unit within the National Park System is vested in its creative act, proclamation or executive order generalizations are difficult. However, since its mission has changed very little from its inception, the resources important to NPS management objectives are largely those which provide visitor enjoyment and recreation uses. Resource inventory statistics needs are therefore limited to land areas administered and visitor uses.

Reports Management

The objectives of the National Park Service reports management program are to avoid unnecessary or duplicate reporting and to insure that all reporting instructions, forms, and procedures are as complete, simple and direct as possible, and that their purposes are clear to the respondents. In addition, contents of reports should provide adequate data at appropriate intervals in proper patterns and serve as a central reference point for information regarding all NPS reports.

Public use statistics reporting is individually tailored to each field area, within its constraints of geography and staffing, to produce comparable data as an index of park workload rather than "recreation experiences" of the public.

The content of all reports is the responsibility of the various operating units -- whether at the park, cluster, region or headquarters level -- which require the information for their program.

Staff responsibility for Service-wide reports management has been assigned to the Branch of Organization and Management, Division of Management Analysis in the Washington Office. However, as a special assignment the Assistant Director, Policy Analysis and Programming, was made responsible for approving any request by the Washington Office to the field for information of a statistical nature. The regional directors are responsible for the implementation and the administration of the reports management program within their respective regions and within field activities under their management control.

Liaison with the Bureau of the Budget for approval of data collection from the public is through the Chief, Branch of Organization and Management. Technical questions of sampling procedures, etc., are referred to the Chief, Branch of Statistics Analysis, who is also in the same Washington Office division.

Most agency handbooks have been discontinued as of July 1, 1969, to encourage creativity and flexibility in

field operations. Service-wide reports, however, must still comply with standards in the Reports Management Handbook. This assures uniformity of data supplied to the Department, Congress, and others and assures adherence to regulations of the Bureau of the Budget and the General Services Administration.

On a Service-wide level, the Branch of Organization and Management coordinates reporting requirements, designs forms, and arranges for their printing and distribution. There are exceptions where the report is required by another agency (e.g., GSA forms used for real property inventory reports to General Services Administration).

At the present time, there are several task forces within the National Park Service seeking to eliminate deficiencies in administrative systems of the Service and their accompanying reports -- personnel, payroll, supply management including real property, programming, budgeting, accounting, and finance. These studies contemplate the use of automatic data processing wherever feasible and seek to implement the uniform definition of a park visit.

Land Resource and Use Inventory Information

National Park Service has no program for collection of statistics other than those compiled in administering authorized activities and those requested by competent authority outside NPS. The principal inventory statistics compiled for both of those purposes are land areas and public use of the national parks.

The Division of Land Acquisition maintains permanent land area records for all national parks, monuments, seashores, recreation areas, etc., and current records of federally-owned lands and easements. From these records, a semiannual report entitled Areas Administered by the National Park Service is prepared for use within the Service. Acreage data from these records also are used in National Parks and Landmarks, prepared annually by the Division of Information. Detailed records show the acreage in each unit by county, state and manner of acquisition (public domain, etc.). However, these have not been included in the published reports.

The Division of Land Acquisition is responsible for checking and summarizing NPS data for the real property inventories which are submitted by the Department annually to GSA and biennially (since 1964) to the House Committee on Government Operations. Reports are prepared by individual management units, submitted through appropriate regional offices, and summarized before transmittal to the Office of Management Operations, Assistant Secretary for Administration.

The Division of Management Analysis compiles statistics which reflect total public use of the national parks. Data published monthly compare "visits" and "overnight stays" for the month with those of the prior year for each area reported (a few parks are excluded from the reporting system because of a lack of consistent or meaningful data, or because the property is not federally-owned).

Annual tabulations are compiled which segregate overnight stays into categories of camper-days and overnight visits in commercial accommodations. The latter includes both concessionaires and private owners within the parks' boundaries. Multiyear summaries of such visits are available from 1904 through 1964. However, a uniform definition of a park visit was not developed until 1960 but was then made applicable to almost all field areas.

Bureau of Sport Fisheries and Wildlife

The Bureau of Sport Fisheries and Wildlife (BSF&W) is part of the Fish and Wildlife Service. In 1968, the BSF&W administered fish and wildlife programs on more than 29 million acres, including lands administered through agreement with other agencies and those held under easement and lease agreements; about 26.3 million acres are section 10 lands over which BSF&W has primary or sole administrative control. 19/

19/ Annual Report of Lands Under Control of the Bureau of Sport Fisheries and Wildlife as of June 30, 1968.

Land Resource and Use Inventory Information

The BSF&W does not have a reports control program. However, it generally follows departmental and GSA instructions on reports management and has not issued supplemental guides or changes. 20/ Collection and compilation of statistical information is the responsibility of each division for its assigned functions.

In describing its data collection activities, officials of BSF&W identified nine examples as representing a large portion of such activities: migratory bird data, national survey of fishing and hunting, flyway habitat management unit project, public use (of refuges and fish hatcheries), grant-aid projects (for programs carried out by states), DIPS (Department Integrated Payroll System), violation reports (from game management agencies throughout the country), chemical testing, and fund apportionment. 21/

All nine examples are listed as an indication of the main thrust of the Bureau's data collection activities. Public use data is the only item resembling an inventory of public land resources and uses. Examination of publications and other statistical summaries disclosed two other samples of data collection activities which produce inventory information: records of lands controlled by the Bureau and annual reports of the management of Bureau lands for farming, grazing, forestry and other uses not directly related to fish and wildlife programs or public use activities.

Inventory information compiled by the BSF&W is contained in several reports which it assembles on a regular basis. These are available to interested persons.

20/ Letter of October 15, 1969 from Assistant Director, BSF&W, to Staff Assistant, Public Land Management, USDI.

21/ Ibid.

The Annual Report of Lands Under Control of the Bureau of Sport Fisheries and Wildlife as of [June 30, 1968] is compiled each year by the Division of Realty. It is the source of acreage data used officially by the Bureau in all reports and publications. This report is reproduced in limited quantities for agency use only.

The report contains a table for each of the following categories:

1. Migratory Bird Refuges - waterfowl.
2. Waterfowl Production Areas.
3. Migratory Bird Refuges - general.
4. Big Game Refuges.
5. Game Ranges.
6. Wildlife Ranges.
7. Coordination Areas.
8. Wildlife Research Centers.
9. Administrative Sites.
10. Fish Hatcheries.
11. Fishery Research Stations.

Each table shows the name of the refuge or other unit in each category (identifying other use categories if applicable), its location by state, the acreage in the unit by tenure status or method of acquisition, cost if purchased by BSF&W, and the agency with primary control if other than BSF&W. A table is also included to show, by state and adjacent unit, the acreage of nonrefuge areas closed to the hunting of migratory birds. Supplementing the acreage tables are maps showing the approximate location in each state of each refuge, range, wildlife research center, fish hatchery and fishery research station. In addition, they show the number of national waterfowl production areas that have been acquired in each county by fee title and by easement, and the counties in which such areas are in the process of being acquired.

The Bureau does not process its real property data by automation (although it did so until about a year ago and is working on a computerized system to include these data). Records are maintained in each regional office, which submits the regional portion of the annual report to the Division of Realty, where data are aggregated into the

Bureau report. Data for the GSA real property inventories are also obtained from the same sources. GSA forms are prepared by the regional offices and forwarded to the Division of Realty for review and transmittal to the departmental office of Management Operations, from which they are transmitted to GSA.

National Wildlife Refuges, summary of farming, grazing, haying, and timber programs, calendar year [1968], is an annual summary of the farming, grazing, and haying operations on refuges by both permittees and refuge personnel, and timber removal. This report is summarized by regions, with Bureau totals, from a Refuges Annual Narrative Report 23/, which is submitted three times each calendar year for each refuge with reportable activities. In addition to the narrative, these reports contain various tables and other statistical data in prescribed format and in more detail than contained in the summaries, i.e., kinds of crops grown.

A summary for each region shows, by refuge, number of permittees, acres involved for each activity (not by crops for farming), quantity harvested (bushels or tons of farm crops, animal unit months of grazing, tons of hay, and board feet, cords or other units of timber), and except for farming, the revenue. Farming permits usually, and in some instances haying, are on a share of crop basis.

These data are not presently processed by ADP although automation systems are being considered.

Refuge Receipts - Fiscal Years 1965-1969, is an example of a report compiled annually by the Division of Finance from the records of actual receipts and the payments of expenses for sales. It is reproduced in limited quantities for management needs only and lists refuge receipts and expenses for sales by fiscal year for 1965 through 1969. A breakdown by regions is included for 1968 and 1969. Sources of receipts are oil and gas, forest products, grazing, trapping, haying, concessions, surplus animals, sand and gravel, and others. Amounts in this fiscal year report do not agree with the revenue reported for similar items in the calendar year refuge "narrative" report.

23/ Bureau of Sport Fisheries and Wildlife, Dept. of the Interior, Wildlife Refuge Field Manual, Section 2414.

National Wildlife Refuge System, 1968, Public Use Report -- Preliminary Analysis of Systemwide Data is a calendar year summary of monthly public use inventory data estimated by refuges and fish hatcheries. In 1968, data were converted to ADP, permitting more detailed data to be included as well as facilitating handling and analysis. It was reproduced in limited quantity for management purposes.

This report summarizes the reports submitted for the 164 refuges and fish hatcheries that were staffed in 1968. It shows the total visits and average hours per visit during 1968 for 30 activity uses of the refuges. The number and average length of visits are shown for 11 activities which recorded greatest use during the high use month of July. Another table shows the month of highest use for 11 other selected activities.

Comparisons are made between visits for 1968 and 1967 for each of the 10 highest recreational use activities, total activity visits, total 12-hour visitor days, total wildlife-oriented visits, and total nonwildlife-oriented visits. Data are shown for number of refuges with entrance and/or user fees for the years 1965 through 1969.

Big Game Inventory [for 1968] is an annual report compiled in the Bird and Mammal Laboratories, Division of Wildlife Research. The first three parts are devoted to the annual kill and population estimates for big game, by states and species, as provided by the various states through the Division of Federal Aid. Part 4 is an estimate of big game numbers in parks and refuges, by state and species. Part 5 is an estimate of numbers of big game on National Wildlife Refuges by state and species. Data are shown separately for 14 individual species and lumped together for five additional species of deer. Estimates are obtained by refuge officials and provided about every three years. Representatives of BSF&W say this is justified in view of the slow changes in refuge populations and the cost of the inventory.

Part 6 consists of estimates, by species, of big game numbers, population trends, and relative abundance on each applicable national park, national monument, national

recreation area and parkway. Estimates are provided by officials of the National Park Service.

Report of Wildlife Outputs, Calendar Year 1968, is a consolidation for the Bureau of summary data from the wildlife inventory reports submitted by refuges; it does not include the Arctic Game Range. Methods employed by each refuge in making wildlife inventories, including sampling techniques and frequency, are set out in a Wildlife Inventory Plan prepared for the individual refuge. 24/

Numbers are shown for total species of upland game, big game, and rare and endangered species. Use days are shown separately for swans, geese, ducks, coots, and mourning doves and by all species for other migratory game birds and for rare and endangered species. Animal unit months are reported for all species of big game. Production (number of young produced) is reported separately for swans, geese, ducks, coots, and mourning doves, and by all species for other migratory game birds and for rare and endangered species. Habitat acres are shown for the total of swans, geese, ducks, and coots, migration and wintering waterfowl, production-prairie type ducks, production - other waterfowl, mourning doves, other migratory game birds, other migratory birds, specifically managed habitat for other migratory birds, upland game, big game, other resident wildlife, specially managed habitat for other resident wildlife, and rare and endangered species.

National Wildlife Refuges, 1968 is the annual report of the BSF&W. It reviews the National Wildlife Refuge System and its accomplishments. Prepared in a similar format for the past several years, this publication presents the principal programs on the refuges. Although the report is largely narrative and pictorial emphasizing items with public relations value, considerable statistical data (usually for 1967) are interlaced into the narrative. Only three brief tables are included which show the total acreage to be acquired for four refuges added to the system in calendar year 1967, the acreage in each of the six large

24/ Memorandum of June 30, 1965 from Assistant Director, Wildlife, to Regional Directors, Regional Refuge Personnel, Refuge Managers and Biologists.

game refuges located in the Western States exclusive of Alaska (two in Arizona, two in Nevada and one each in Montana and Oregon), and refuge income in fiscal year 1967.

The inside back cover carries a map which shows the name and location of each migratory bird refuge, big game refuge or range, game range, and wildlife range.

1968 List of National Wildlife Refuges is arranged by states and indicates the counties in which each refuge is located. It also lists the date established, acreage, and principal wildlife species protected. In addition, the agency having primary control is shown if other than BSF&W along with lands adjacent to refuges which are closed to hunting by Presidential proclamation or by order of the Secretary of the Interior.

Department of Agriculture

The Department of Agriculture administers the second largest acreage of section 10 lands; nearly 184 million acres. Except for about one-third of a million acres which was acquired by the Agricultural Research Service for "agricultural research and related purposes", this land is administered by the Forest Service.

Reports Management

Since it was established in 1905, the Forest Service has been collecting data for forestry and related resources, mostly related to the management of the National Forest System lands. The Service has a formal reports management program, the objective of which is to provide management with the information needed to effectively carry out all Forest Service programs in the most efficient and economical manner. Specific objectives include the eliminating of non-essential reporting, and the collection of nonessential information and data, combining reports, and simplifying reporting procedures and requirements to the greatest extent possible, and to provide a simple form or format for reporting the required information or data. Other objectives are that each report is to be prepared at the highest organizational level where the information is available, reduction of reporting frequency and distribution of reports

to the minimum required for sound operation, utilization of available information to the greatest extent possible, and reduction of reporting impact on field units to the minimum.

Forest Service reporting requirements are restricted to management needs and external requirements.

The line officer at each organizational level establishes controls and procedures to meet the program objectives within his unit:

- The Division of Administrative Management, Washington Office, is responsible for administering the program.
- The Director of each functional division, Washington Office, is responsible for determining and justifying report needs and for preparing format and instructions. Also, he must eliminate unneeded reports.
- The Regional Forester and Station and Area Director are each responsible for establishing an adequate program within his unit.

The Forest Service has six types of reports: one-time, situation, recurring, feeder, external and internal. However, procedures are largely concerned with recurring reports, whether external (required by an agency outside the Forest Service) or internal.

Each office which requests approval of a report is responsible for maintaining a prescribed reports control file for each recurrent report required from any other Forest Service office or unit. Reports schedules are to be maintained for all recurring reports.

The Forest Service has an active program for elimination of reports or reduction in coverage and/or reduction in frequency, determining the adequacy of source records, effectiveness of format and clarity of instructions, and review of items considered in evaluating costs of report.

However, it has no requirements for maintaining a control of the individual management records which are kept and line officers have a responsibility for making certain that required records serve a useful purpose to justify the cost for upkeep.

Although the Forest Service has not designated anyone as responsible for initiating statistical surveys, it has policies for publishing such data. Before publication, the final compilation must be reviewed within the agency by persons familiar with the data, and with related data in the same field, to identify errors or inadequacies in the procedures followed and to discover any likely source of misinterpretation. No other responsibilities for the approval or publication of such data are assigned.

Forest Service is presently in the process of developing an integrated Management Information System. The objectives of this system (Project INFORM) are to increase the quality of information available for decision-making, to reduce the reporting load by eliminating duplicate reporting, and to process reported data more efficiently.

The system under development is being designed to furnish data for reports required by external agencies, such as the Department of Agriculture, Bureau of the Budget, and Congress. The system will also provide statistical information needed by each function and activity within the Service to make information available to management in a form and format best suited for decision-making. These requirements are based to a large degree on the same basic statistical data and program information, most of which is present in the current reporting systems.

Each of the functional areas maintains the statistical data necessary for program establishment, evaluation, and management.

The total automated system, when implemented, will include three major components. A general processor will be used to handle operational data which will allow wide versatility in retrieval and summarization of data. A geographic locator will maintain inventory data, both resource and real property, by actual on-the-ground location;

administrative, political, and topographic boundaries will also be part of this component. The third component will tie the first two together in an overall system and provide analytic and display capabilities.

Information will be gathered from outside agencies wherever possible, e.g., soil types from SCS topographic data from Army Map Service and USGS, recreation data from BOR. Where possible, this information will be acquired in machine usable form for direct input. Efforts will be made to make outputs of the INFORM system directly usable by other agencies.

Real Property Inventory

The Chief of the Real Estate Management Division, Office of Plant and Operations, Department of Agriculture, is the designated representative for real property inventories. This office has responsibility for compiling the Department's annual inventory reports for submission to the General Services Administration.

The Forest Service Director of Budget and Finance, under the Deputy Chief for Administration, is responsible for the real property inventory information sent to the Office of Plant and Operations to be transmitted to GSA.

Installation reports on GSA Forms 1166 are transmitted from administrative areas through regional offices for review and preparation of the GSA summary and the Forest Service regional reconciliation statement. 25/

Land Resource and Use Inventory Information

Although the Forest Service has many internal reports, only a few are published for public information. Data for these reports comes from the field level but may be summarized at some higher level to serve a particular need. This section discusses these published reports and the source of their information.

25/ Forest Service Regional Office Finance and Accounting Handbook, 594.16c.

Report of the Chief of the Forest Service

This summary report is published annually and is designed to provide information of interest to the public concerning Forest Service accomplishments for the preceding year, area data, resource inventory and use data, and other information. It does not contain the detailed data necessary for program planning, budgeting and management which come from the many Forest Service internal reports.

Area data are presented for all lands administered by the Forest Service including the acreage in national forests, national grasslands and the land utilization projects, by state. The data are compiled from annual reports submitted by the forest supervisors, where the basic detailed land status records are maintained, through the regional foresters to the Chief of the Forest Service. These data are revised each year to reflect acquisitions, disposals and corrections.

Volumes and values of timber cut and sold for the current year originate at the ranger district level. The timber cut is based on actual measurement while the timber sold is reported by the unit authorized to make the sale. Volumes are combined quarterly at forest supervisor's offices and reported to the regional offices where they are then compiled and transmitted to the Chief.

Actual acreage of timber stand improvement and acreage planted and seeded are reported annually by the district rangers to the forest supervisors. These data are processed and forwarded to the Chief's office. Along with current year activities, the cumulative total acreage successfully planted and seeded is also reported annually. This cumulative total is determined by annually adding the acreage of new planting and seeding and subtracting that acreage found to be unsuccessful.

The estimated harvests of principal big game animals in the national forests, national grasslands and land utilization projects are reported annually. This information is provided to the Forest Service by the State governments. The Forest Service cooperates with the states to facilitate wildlife data collection.

Detailed annual reports are made by rangers and forest supervisors on the construction, reconstruction, and maintenance of national forest roads, bridges, and trails in each state on an actual measured basis and are compiled in the Chief's office.

Actual number of recreation sites, capacities and area (by type of facility) and estimated recreation use are reported annually from the ranger districts into a central computerized system, the Recreation Management System (RIM) of the Forest Service. The accuracy of the use information varies because some is based on actual count, some on correlated road counts, and other estimated by Forest Service field personnel, using their best general knowledge.

Data which appear on the number of fires by type and the area burned are actual number and acres compiled from scheduled reports from ranger districts. Data from individual fire reports are forwarded from the ranger districts to the forest supervisors and regional forester's offices on a daily basis during fire seasons. Regional offices then submit fire reports to the Chief's office weekly, with appropriate revisions to keep the records accurate. Data shown in the Chief's report comes from this source.

Actual number of forest fires, area protected and area burned on state and private land along with expenditures for such activities are provided by State governments on a current basis and compiled for the annual report.

Annual reports are submitted by field offices on the distribution of forest and wind barrier planting, actual area planted or seeded on state and private lands, and the estimated acreage in need of planting.

Cooperative forest management progress and actual expenditures are reported annually from the field through the regional forest offices and state and private forest area offices to Washington, D. C., and are included in the Chief's report.

Insect and disease control data are reported annually from ranger district or forest level, depending upon the size and nature of each control project. Measures of

accomplishment are reported in acres surveyed, acres treated, and trees treated. Acreage information is generally estimated from ground and aerial detection surveys along with planimetric maps and aerial photographs.

Actual receipts and expenditures, reported in the Chief's report, are compiled by the regional fiscal agents from forest supervisor's reports. Annual reports are submitted to the Chief's office.

Distributions of receipts to states and counties, based on collections from the national forest lands, national grasslands and land utilization areas, are calculated on an annual basis by the Chief's office. Receipts from national forest lands are computed on a fiscal year basis while receipts from national grasslands and land utilization areas are computed on a calendar year basis.

In summary, although the Chief's report provides current information on wood, wildlife and recreation resources, there is practically no information on water and forage use. As it now stands, this report gives the impression that wood, wildlife and recreation uses are the only important uses of national forests. Inclusion of statistics showing a broader picture of the use of Forest Service lands would be most helpful in showing the multiple outputs produced under the multiple use concept.

Timber Trends in the United States

This is a periodic "Forest Survey" report published by the Forest Service through its Forest Survey program. The most recent report was released in February 1965 as Forest Resource Report No. 17. It supplements Forest Survey conducted for individual states under the program. Timber Resources of the Future published in 1958 was also a "Forest Survey" report.

The Forest Survey project is a nationwide continuing forest inventory conducted by the Forest Service on national forests and in cooperation with the states and other public and private organizations. It is designed to provide sound resource data essential to formulation of forest policies and programs at national, state and local levels.

Responsibility for the Forest Survey is assigned to the Forest Service Division of Forest Economics and Marketing Research Service. Inventory phases of the Forest Survey are conducted by the Forest and Range Experiment Stations. The Economic Research Division of the Forest Service in Washington has the overall coordination responsibility and responsibility for determining present and prospective requirements for timber and other forest products.

Under the Forest Service program, timber surveys are completed in each state on the average of every 11 years. Basic data for these surveys are obtained by a sampling procedure designed for use by survey units throughout the Nation. The survey methods are designed to provide comparable, reliable statistics, primarily at the state and national level.

The survey is not designed to provide accurate statistics below state level unless the state desires a more intensive survey and pays the additional cost. Ownership information is collected through local contacts, from correspondence, and public records.

Scope and intensity of survey reports are determined by the Forest Service through consultation with state, private industry and other cooperators. A systematic sampling procedure is followed taking actual measurements of volume, growth, and results of utilization practices. Each report updates previous reports and includes new statistics developed in state reports, data obtained from revised national forest timber management plans, special resource reports prepared by Federal, state and private industries, and field remeasurements.

These survey reports provide information on trends in forest land area and conditions; quantity, quality and location of standing timber; ownership of forest land and timber; timber growth; mortality; use of forest products by wood-using industries and consumers; increase or decrease of forest land; and related data bearing on future timber supply and demand.

Because timber survey reports are an appraisal of the timber situation, the reports generally do not consider

the utility of forest areas for watershed management, grazing of domestic livestock, recreation, wildlife, or other purposes. Multiple use values of forest stands have not been appraised. These values could well exceed timber value in many instances. Recognition of multiple use relationships and impacts as part of the survey reports should be given consideration.

Annual Report of the National Forest Reservation Commission.

Statistics in this report are prepared by the Forest Service to provide a very accurate, detailed accounting of area and expenditures for lands acquired pursuant to the Weeks Law and other supplemental laws. In addition, it shows the gross acreage and price approved for purchase in the current reporting year and all land purchased through the current year under the Weeks Law, the Forest Receipts Act and other special acts by fiscal year. It presents separate data on acreage approved for purchase and land purchased under the Weeks Law as amended, and the Forest Receipt Act, both tabulated by states and purchase units.

Data are presented on exchanges for the current reporting year and all exchanges through the current reporting year which involve exchange of purchased lands and stumpage for state and privately-owned land under the Act of March 3, 1925, as supplemented. A record of appropriations for national forest land acquisition, by fiscal year, is also shown.

This report is updated each year with actual acreage and costs, purchases and exchanges which have been reported by the field offices, and the addition of actual acreages approved by the Commission.

While the report is very instructive, it must be kept in mind that only purchases and exchanges which involve these acts are included. There is no published report available on other lands purchased, exchanged, or received by donation, structured in a similar manner, to permit a complete picture of Forest Service land acquisition. Such a publication is needed to present the full range of acquisition activities, cumulative and current year.

National Forest System - Areas as of [June 30, 1968]

This is a concise annual report of all areas administered by the Forest Service. Acreages are identified by major category: national forests, purchase units, national grasslands, land utilization projects, research and experimental areas, and other areas. For each category, data are provided on the gross area within the boundaries, National Forest System lands, lands in the process of acquisition, and other. Distribution of acreage in the above categories is also provided by Forest Service regions, by state, and individual national forests as well. Area data are also provided on national game refuges, national monuments, national recreation areas, wilderness areas, and primitive areas in national forests.

All of the area data for this publication are compiled by the Forest Service Washington Office from annual reports received from national forest and regional offices where current records of land status are maintained.

The Annual Fire Report for the National Forests

This compilation of statistics is for all forest fires which occurred on national forest land and other lands protected by the Forest Service. The data for this report are compiled from daily fire reports, submitted during fire season, by district ranger and forest supervisor offices to regional forester offices. Regional offices submit weekly reports during fire seasons to the Washington office which are compiled annually. This report includes data by general causes on number of fires and area burned and by major causes, tangible damage and number and size class of fires. Information is shown by forest region, national forest and state.

In addition to the foregoing public information reports, the Forest Service had numerous scheduled reports from field offices to provide information and data for internal management purposes. Examples of such reports which provide detailed inventory, resource use and accomplishment information are:

Grazing Statistical Report (annual)
 Timber Cut and Sold Report (quarterly)
 Timber Management Planning (annual)
 Timber Sale Accomplishment Report (annual)
 Watershed Management Report (annual)
 Annual Wildlife Report
 Forest Survey Progress (annual)
 Land Acquisition Report (quarterly)
 Program Accomplishment - Road Construction and Use Agreements (annual)
 Rights-of-way Progress and Accomplishment (annual)
 Land Exchange (annual)
 Forest Development Road Inventory (annual)
 Forest Development Trail Inventory (annual)
 Forest Development Bridge Inventory (annual)
 Forest Highway Inventory (annual)
 Forest Airfield Inventory (annual)

Department of Defense

In 1968, the Department of Defense (DOD) administered nearly 31 million acres of federally-owned land in the United States; 17,177,000 acres were section 10 lands. This acreage is distributed between military and civil functions and between the military departments of DOD as follows:

<u>Military Functions</u>	<u>Section 10 Land (Public Domain)</u>	<u>Other (Acquired Land)</u>	<u>Total Federally-owned Land</u>
Army	7,345,932	4,054,177	11,400,109
Air Force	6,937,474	1,626,125	8,563,599
Navy	2,032,390	1,569,035	3,601,425
Subtotal	16,315,796	7,249,337	23,565,133

Civil Functions

Corps of Engineers	<u>861,146</u>	<u>6,287,004</u>	<u>7,148,150</u>
Total	17,176,942	13,536,341	30,713,283

There are three activities in the DOD which provide inventory information on the resources and uses of the public lands which it controls: real property inventories, natural

resource management programs, and outgrants. The real property inventories identify section 10 lands but no similar separation is made for data compiled in the natural resources management programs or for outgrants; information collected is for all lands controlled by DOD at each reporting installation, including acquired and leased lands.

Reports Management

The Department of Defense and its component departments have a sophisticated reports management program. No study was made of this program, however, because public land management functions are such a minute portion of DOD functions.

Although the Corps of Engineers is responsible to the Secretary of the Army for civil works, legislative authorizations and administration for military and civil activities are so dissimilar that confusion would result if these functions were not treated separately in discussing inventory information.

Military Functions

Real Property Inventory. The Secretary of Defense is required by law to report to the Congress annually the acreage and value of real property controlled by the military services. Each military department is required to maintain an individual real property record for every item of real property and improvements owned, leased or otherwise acquired and controlled by DOD (except for assigned space in public building accommodations). These records are the basic source of information for reports of status, cost, capacity, condition, use, maintenance and management of the real property.

This inventory is maintained by each department at Washington, D. C. headquarters and made available to the Secretary, DOD. It is maintained for the Army by the Office of the Chief of Engineers, for the Air Force by the Office of the Deputy Chief of Staff, Programs and Resources, and for the Navy by the Naval Facilities Engineering Command.

Data are maintained on a current basis, with summary reports for DOD prepared as of June 30 each year. These summaries consist of four sections: index, consolidated categories summaries, individual installation summary, and summary of leases. The data are handled by automatic data processing which permits quick retrieval. Although the inventory contains more detail than is required for the GSA real property inventory, the data needed by GSA are provided on punch cards. From these data, GSA prepares its annual real property inventory for the Department of Defense, military functions.

The inventory summaries prepared for DOD by the military departments are confidential. From these summaries and other reports on real and personal property and selected financial assets, a report is prepared for the President and the Congress in accordance with the National Security Act of 1947. 26/ This report, Real and Personal Property of the Department of Defense is not classified and can be obtained by the public. It is distributed to several congressional committees, including the House Committee on Government Operations which includes the entire report in its biennial Federal Real and Personal Property Inventory Report (Civilian and Military) of the United States Government Covering Its Properties Located in the United States, in the Territories and Overseas. Also, it is distributed to other Federal agencies and to libraries which have requested it.

The only inventory data for section 10 lands contained in this report are the tables which report by state the acres of public domain controlled by each military department, and the tables which report the estimated current value, by state, of public domain lands used by each military department and for civil functions, prepared at the request of the House Committee on Government Operations.

Land Resource and Use Inventory Information

A single directive prescribes DOD policies and establishes an integrated DOD multiple use program for the

26/ 10 U.S.C. 2701.

renewable natural resources in forests and woodland, fish and wildlife, soil, water, grassland, outdoor recreation and natural beauty, compatible with the military mission, in compliance with the natural resource policies of the Administration. 27/ The heads of all military departments and defense agencies, all DOD components, and DOD personnel are directed to conduct and support effective conservation policies and programs consistent with the directive. This directive outlines resource program policies for Soil and Water Management, Forest Management, Fish and Wildlife Management and Pollution and Pesticide Control. Policies are outlined for access to military lands and waters by the public and by Federal and state conservation officials.

DOD instructions were issued separately for each of the following: Natural Resources -- Fish and Wildlife Management, Natural Resources -- Forest Management, and Natural Resources -- Soil and Water Management. Each instruction contains a format for the report to be used or the minimum information to be obtained in connection with each applicable military installation. Each of the military departments has implemented the DOD instruction with its own instructions, detailing responsibilities and procedures and enclosing the format of report to be used. The DOD report format for each resource category is shown in Figures 1, 2 and 3. Included for each report is a summary of DOD instructions for compiling it and the modifications made by the military departments.

The data from these reports are not computerized, however, they are summarized by the military departments for administrative uses. A brief summary for DOD is prepared in the Office of the Secretary; for fiscal year 1968, it was a single page report, "Natural Resources Management Data". It contained the total acres of military real property controlled and for each of the military departments showed (1) the number of installations with a program and the total acres under it, (2) the number of installations

27/ DOD Directive 5500.5.

FIGURE 1. Fish and Wildlife Report required to be submitted by each Military Department (DOD Instruction 4170.6)

FORMAT B

Installation

FY FISH AND WILDLIFE REPORT

1. State, installation and category

1/

2. Date cooperative plan (was) (will be) completed

3. Extent of land and water areas in the Fish & Wildlife program

Land acreage _____
Water acreage _____
Miles of stream _____
Miles of shoreline _____

4. Degree of Public Access: Use the following legend and place the appropriate letters in the blanks for hunting, fishing and other:

- A. Generally open with controlled public access within manageable quotas.
- B. Installation personnel and guests.
- C. Installation personnel only.
- D. Closed (Specify whether for hunting, fishing, or other)

For hunting _____
For fishing _____
For other outdoor
recreation _____

(includes other outdoor recreation, i.e., camping, picnicking, winter sports, etc., not swimming pools, ball parks, golf courses, etc.)

5. Estimated number of visitors granted access for:

Hunting _____
Fishing _____
Other Outdoor Recreation _____
TOTAL _____

6. Brief summary of natural beautification projects.

7. Explanation if public access is denied for hunting, fishing or other outdoor recreation.

1/ Categories:

- I. Installation suitable for Conservation Program.
- II. Installation whose suitability is still being determined.
- III. Installation determined unsuitable for Conservation Program.
- IV. Installation with no land or water areas suitable for Conservation Program.

Summary of DOD Instruction 4170.6 applicable to the Fish and Wildlife Report shown
In Figure 1, and modifications made by the Military Departments

Reporting Requirements of DoD: Each military department will: (1) obtain this report annually from each installation and facility in the U.S. and submit two copies to DoD by September 1; Category II, III and IV installations will complete only applicable portions, and those in III and IV will make only initial submissions; (2) submit also to DoD a summary showing: (a) the number of cooperative management plans received and the number pending, (b) the number of installations in each category I through IV, (c) the number of installations in each degree, A through D, of public access, and (d) the estimated total number of visitors granted access for hunting, for fishing, for other outdoor recreation, and the grand total for all three classes of outdoor recreation.

Modifications in the Fish and Wildlife Report by Military Departments:

Army (AR 420-74, June, 1966)

1. Item 4D revised to show only "Closed," omitting parenthetical statement.
2. Items added to find out--
 - a. If special liscense or permit fees charged: for hunting, for fishing; and
 - b. Number of youth group visits: by Boy Scouts; by Girl Scouts; by other Youth Groups.
3. Item 6 revised to obtain acres of development contributing to natural beauty.
4. Reporting requirements: This report is included as Part III of a single annual report titled "Installation Natural Resources Report." It is to be dispatched by each installation in an applicable DoD category through Command channels, in triplicate, to Chief of Engineers by August 1.

Air Force (AFR 126-2, 30 December, 1965)

1. Item 2 revised to obtain dates the Cooperative Management Plan was completed, and forwarded.
2. Item 3 revised to change "miles of shoreline" to "miles of salt water shoreline" and to get for both game and fish the species and the fiscal year each was stocked.
3. Item 5 revised to obtain estimated of numbers of Base personnel participating in each class of outdoor recreation as well as visitors who are granted access.
4. Items added to determine--
 - a. Whether special liscenses or permit fees are charged and the amount collected: for hunting; for fishing,
 - b. If Youth Groups are granted access, and
 - c. If there are problems and potential problem areas.
5. Reporting requirements: Each major Command is to submit three copies of the report for each Command installation in an applicable DoD category, with a summary for the Command containing all items in the DoD summary plus the number of installations granting--and the number not granting--access to Youth Groups, to Air Force Headquarters by August 1.

Navy (NAVFAC 11015.10A)

1. No change in form.
2. Reporting requirements: Each Engineering Field Division is to submit three copies of the report for each division installation in an applicable DoD category, with a summary for the division similar to that required by DoD, to the Naval Facilities Engineering Command by August 1. The Commandant of the Marine Corps will do likewise for reports for Marine Corps installations.

FIGURE 2. Suggested Forest Resource Management Report for use by Military Departments (DoD instruction 4170.7)

SUGGESTED FORMAT A

FOREST RESOURCE MANAGEMENT REPORT FY _____

INSTALLATION OR FACILITY _____
(Name) _____

_____ (Location)

1. Total acres of Managed Woodland: _____
2. Professional Forester Time Used: _____ (man months)
3. Long Range Forest Management Plan: (a) Date Prepared: _____.
(b) Date last revised: _____. (c) Date scheduled for next revision: _____.
(d) Has annual work plan or increment been prepared for next fiscal year: (Yes) (No).
4. Timber Harvests: (a) Acres harvested: _____. (b) Sawtimber: bd. ft.
(c) Pulpwood: cords. (d) Poles & Piling ____ bd. ft. (e) Other: _____. (f) Gross Proceeds: \$ _____.
5. Timber Stand Improvement: (a) _____ Acres. (b) Gross Expenditures: \$ _____.
6. Reforestation: (a) By tree planting: _____ Acres. By Direct Seeding: _____ Acres. (b) Windbreaks & Shelterbelts: _____ Acres. (c) Gross Expenditures: \$ _____.
7. Fire Protection: (a) Acres Protected: _____. (b) Forest Fire Lanes: Miles constructed: _____, Miles maintained: _____, (c) Acres Control burned: _____. (d) Gross expenditures: \$ _____.
8. Flood and erosion control to protect timber areas: (a) No. of structures: _____. (b) No. acres of soil treatment or planting: _____. (c) Gross expenditures: \$ _____.
9. Timber Access Roads: (a) Miles constructed: _____. (b) Miles Maintained: _____. (c) Gross expenditures: \$ _____.
10. Number _____ and Type _____ of Forestry operations contributing to natural beauty.
11. Administrative Management Costs: \$ _____. (Includes all program costs not included in items 5 through 9 above.)
12. Total Program Expenditures: \$ _____.
13. Estimated value of lumber products harvested & used on installation \$ _____.

Summary of DoD Instruction applicable to the suggested Forest Resource Management Report shown in Figure 2, and modifications made by Military Departments

Record keeping Requirements of DoD: Each military department is to establish a record keeping system suitable for management purposes and maintain at departmental level management information to include, as a minimum, the information required by the suggested report, updated on an annual basis. Military Departments are not required to submit reports to DoD.

Modifications in the Forest Resource Management Report by Military Departments

Army (AR 420-74, June, 1966)

1. Items 3(c), 3(d) and 8 (a through c) omitted.
2. Item 12 revised to obtain miles of roadside planting and acres of woodland improvement which contribute to natural beauty.
3. "Remarks" section added.
4. Reporting Requirements: This report is Part II of a single annual report titled "Installation Natural Resources Report." It is dispatched by each installation having 100 or more acres of forest land through Command channels, in triplicate, to the Chief of Engineers by August 1 each year. Additionally, other installations planting windbreaks and shelterbelts will furnish information applicable to item 6.

Air Force (AFR 126-5,24, July, 1967)

1. Items 8 and 13 omitted.
2. Item 2 expanded to show time and cost by categories of professional forester time, and the name, grade and location of the program supervisor.
3. Item 3(d) expanded to show work plan details, including estimated costs.
4. Item 4 expanded to add "distillate stumpwood" and to obtain costs by categories.
5. Item 9 expanded to add item for "equipment procurement."
6. Item added to obtain number of wildfires, acres burned and estimated dollar loss.
7. "Remarks" section added.
8. Reporting Requirements: This report is applicable to each Air Force installation having 50 or more acres of unimproved grounds that are considered productive or potentially productive of forest products, not including trees for landscaping purposes. Each major command is to forward two copies of each applicable report to HQ USAF before August 1 each year; and one copy to the U.S. Air Force Staff Forester, Atlanta, at the same time.

Navy (SECNAVINST 11015.4A, Mar 12, 1965 and Supp. - 1, Oct. 15, 1965)

1. No change in suggested form.
2. Reporting requirements: No supplementation of the DoD record keeping requirement regarding specific reporting requirements was noted.

FIGURE 3. Suggested Soil and Water (Land Management) Conservation Program Report for Use by Military Departments (DoD Instruction 4170.8)

ANNUAL REPORT FY _____
 Department of the _____
 Soil and Water (Land Management) Conservation Program

1. Soil and Water Conservation (Land Management) Plans

Installation	Plans Required		Plans Current		Grounds Classification (Current Plans)		
	No.	Acres	No.	Acres	Improved Acres	Semi-improved Acres	Unimproved Acres
TOTALS							

2. Landscape Development Plans and Soil Surveys

Installation	Landscape Plans			Soil Surveys			
	Required No.	Completed No.	Current No.	Required No.	Completed No.	Acres	Acres
TOTALS							

3. Land Outleases and Resource Conservation Plans

Installation	Outleases		Plans Incorporated		Annual Returns (\$)		
	No.	Acres	No.	Acres	Cash Rental	Conservation Benefits	Maintenance Savings
TOTALS							

4. Construction Projects requiring conservation measures

Installation	FY Construction Completions Requiring Conservation Measures			Special Conservation Projects			
	Projects No.	Cost of Measures		Project Backlog		FY Completions	
		Required	Provided	No.	Cost	No.	Cost
TOTALS							

5. Herbicide Treatments

Installation	Kind of Herbicide	Strength of Concentrate	Application Rate of Concentrate	Name of Vegetation Eradication	Acres Treated

Projects enhancing natural beauty will be indicated by an asterisk (*)

Summary of DoD Instructions applicable to the suggested Soil and Water (Land Management) Conservation Program Report, Figure 3, and modifications made by Military Departments

Record keeping Requirement of DoD: Each military department will establish a record keeping system suitable for management purposes and maintain at departmental level management information to include, as a minimum, the information contained in the suggested annual report, updated on an annual basis. Military departments are not required to submit reports to DoD.

Modifications in Land Management Report by Military Departments:

Army (AR-420-74, June, 1965):

1. Item 3 expanded to show separately leases for "grazing" or for "crop or hay" and to include "value of fire prevention."
2. Reporting Requirements: This report is Part I of a single annual report, "Installation Natural Resources Report." It is completed by every Army installation and dispatched through Command channel, in triplicate, to the Chief of Engineers by August 1, each year.

Air Force (AFR-126-4, 2 August, 1967):

1. Item 3 expanded to show separately leases for "grazing," for "crop or hay" or for "recreation."
2. Omitted are the provisions for showing conservation "plans incorporated" into leases (item 3), and the "strength of concentrate" for herbicide treatments (item 5).
3. Reporting Requirements: This report is a responsibility of each major Command which insure the maintenance of the information required by the form for each applicable installation, consolidate such information, and submit the consolidated report to HQ, USAF by September 1, each year.

Navy (SECNAV, Inst. 5430.50A, 15 Oct. 1965):

1. No change in report.
2. Reporting Requirements: Instructions assign responsibility for program development and implementation to the Naval Facilities Engineering Command in accordance with DoD Instruction 4170.8; technical assistance and guidance to Navy and Marine Corps installations is to be provided through its Engineering Field Divisions.

open to public hunting, fishing or other outdoor recreation and the number of visitors who enjoyed such facilities, and (3) the acres of managed forests and the gross proceeds from sale of timber products.

None of these reports are prepared for public information purposes, but data are available to interested persons. The Army "Red Book" contains summaries of some resource management data (for the Army only). The issue for fiscal year 1968 has four tables under land management which summarizes the following: (1) acres and expenditures for maintenance of grounds, by Command, (2) the number of leases, acres leased and receipts (in dollars and in other services) for agricultural and for grazing leases, (3) acres of forests managed, amount of timber sold and receipts, and forest management costs for fiscal years 1954-1961 and by year from 1962 through 1968, and (4) acres burned and dollar losses by forest fires and by grassland fires.

Outgrants. "Outgrants" is used by the Air Force to describe leases, licenses, permits, easements and grants. Although Secretaries of military departments are authorized to make or execute most outgrants, there are exceptions and the regulations of the departments vary widely in format and language.

Data for outgrants are maintained for all departments in headquarters offices. Records for the Navy are maintained by Naval Facilities Engineering Command. Those for the Army, (both military and civil functions) and the Air Force are maintained in the Directorate of Real Estate, Office of the Chief of Engineers, Department of the Army. 28/ These data are handled on ADP equipment, which permits prompt retrieval of items needed for reports to the Congress and other purposes. No complete summarization of the data are made annually for inventory or other purposes. However, these data will be made available insofar as practical in response to requests.

Purposes for which outgrants are made include agriculture, banking, education, fish and wildlife, grazing, housing, industrial private manufacturing, National Guard,

28/ Data for outgrants for Atomic Energy Commission and National Aeronautics and Space Administration also are maintained by this office.

rights-of-way, commercial recreation, private recreation, public park and recreation, quasi-public recreation and storage.

Civil Functions

The civil works activities of the Corps of Engineers in development of national water resources are designed to meet the needs of multiple uses, including flood control, navigation, power, water supply, water quality control, recreation, and fish and wildlife conservation.

Only about 12 percent of Corps projects are on section 10 lands and like the military services, separations are not made between functions carried out on public domain and other controlled land, except for real property inventories. Due to the geographical location, the heaviest use of Corps recreation resources occurs on nonsection 10 lands.

Real Property Inventory. Real property controlled by the Corps for civil works is not subject to the reporting requirement of the National Security Act as are military lands. The annual inventory for such lands is compiled by the General Services Administration as previously described. Data are submitted for projects on GSA forms through the Office of the District Engineer to the Office of the Chief of Engineers for review and transmittal to GSA and are not processed on ADP equipment.

Land Resource and Use Inventory Information

An annual report is obtained for each project on a report form titled "Recreation Facilities and Related Data, Civil Works Project". Financial data are for fiscal years, while other data are on a calendar year basis. This report is prepared by the Corps project representative and forwarded to the Office of the District Engineer, where it is reviewed and transmitted to the Office of the Chief of Engineers by February 1, with a copy to the Division Engineer.

The report form provides for the detailed reporting of a considerable amount of data on the resources and recreational uses of project area.

Part I inventories the project area and recreation facilities. Acreage is shown (broken down between riverbed, flowing easement and fee land) for the recreation pool, acreage above the pool and the total project area. Shoreline miles are shown and the percent of the boundary which is marked. Developed recreation facilities are reported for 21 categories in terms of needs in 5 years, accumulative totals and those developed the past year.

Part II reports on visitation to various recreation areas and by monthly totals; boating facilities and water-craft operations the past year; fish and wildlife; and fires in the project area.

Part III summarizes Corps costs for the past fiscal year and non-Federal cost for the latest available year for capital improvements and for operations and maintenance.

Part IV is a narrative report of any pertinent item not otherwise covered.

Two 1968 project reports were examined in detail: one covering a project area of 59,000 acres had a narrative report of seven single-spaced pages and the other, 119,000 acres, contained a 20-page narrative, plus a listing of 18 photographs. Information in both narratives seemed to be pertinent, complete, and concisely expressed.

These annual reports are summarized for administrative use. The summaries are not distributed outside the Corps, although the information is available to anyone who asks for it.

Selected data from these reports are sometimes used to prepare promotional reports on Corps accomplishments and the availability and use of its recreational facilities. The last one, dated June 1965, covering 1964 activities, is an excellent presentation of facilities available. It contains several illustrations of project sites, photographs of participants in various activities, and a map showing the location of each project. Also shown for each project are the recreational facilities available (including size of the recreational pool and miles of shoreline), the annual and peak day attendance, and the reported catch of sport fish.

Outgrants. Records of Corps outgrants are handled by the Directorate of Real Estate in the same manner as those for Army military functions, as reported above.

CHAPTER II

PUBLIC LAND SURVEY AND TENURE STATUS RECORDS

Cadastral Surveys and Land Tenure Status Records

The Bureau of Land Management maintains over six thousand bound volumes called "tract books," with over 1-1/2 million pages, which contain the present status and history of over 1-1/2 billion acres of public and private lands. Supporting these tract books are nearly nine thousand volumes of "field notes" and 200,000 "plats of survey" (maps), documenting surveys and examinations of the public lands. In addition to these volumes, there are over 11,500 volumes of land "patents" (title documents to land that was originally public domain) which are the source of the legal title for over 6-1/2 million separate ownerships that embrace more than half the United States land area, exclusive of Alaska.

These public land records were initiated as a result of an ordinance passed by the Continental Congress on May 20, 1785, which authorized the Treasury Department to survey and auction public domain lands as a source of revenue. The tract book system, for keeping account of the lands that were sold, was established in the Register of the Treasury about 1800. On April 25, 1812, the General Land Office was established within the Treasury Department to administer the public lands and maintain public land records. In 1849 the General Land Office was transferred to the Department of the Interior and was consolidated with the Grazing Service on July 16, 1946, to form the present Bureau of Land Management.

Public land records maintained by the Bureau are the primary link in the chain of title to all public and private real estate in the 30 public domain states. These records are essential to the administration of the public land laws because they are the only official means by which one can identify title to the public lands still remaining in Federal ownership and to oil, gas, and other minerals reserved by the United States on patented lands.

Public land records consist of four major groups, cadastral survey records, status records, control records and case records. Each is dependent upon and supplements the other.

Cadastral Survey Records

Sales and conveyance of the public lands was dependent on an accurate survey by which descriptive data could be secured to identify the tracts sold and conveyed. Congress, in 1785, adopted what is known as the rectangular system of surveys. This provided for the division of the public lands into townships six miles square by lines running due north and south and others crossing these at right angles, and then subdividing the township into 36 "lots" of 640 acres each, numbered from 1 to 36. By substituting "sections" for lots, and with minor modifications, this has been the authority for surveys up to the present time.

The "direct system" of surveys, authorized by the Congress in 1910, replaced the unsatisfactory contract system. Under this new system, field surveys were carried on by cadastral engineers under the immediate direction of the General Land Office (now the Bureau of Land Management).

Maintenance of the records of official cadastral surveys has been required since 1796 and includes field notes to describe the surveys in narrative form, and plats to portray the areas graphically. All title records for public domain lands are based upon a Government grant or patent, or a confirmed grant which was made by a foreign government while such lands were under its jurisdiction. The description refers to an official plat. Such records are also important because any subsequent resurvey will rely on the field notes and plats of earlier surveys which are permanently filed for reference purposes and are accessible to the public for examination or making of copies.

Field notes and plats are prepared under the direction of the office which supervised a particular survey. Both the methods of survey and the completed records are reviewed in the Washington office of the Bureau of Land Management.

The original plats and field notes are filed in the State offices of the Bureau with duplicate originals filed in Washington for ready reference. Triplicate original plats are the basis for the master title plats in the individual land offices.

In those states where the public land surveys have been considered complete, the original plats and field notes, except for Oklahoma, have been transferred to the respective states.^{1/} The duplicate original plats and field notes for Ohio, Indiana, Illinois, Iowa, and Missouri have been transferred to the National Archives, since management activity there is minimal.

The Bureau of Land Management is employing modern microfilm techniques to make survey field notes more usable and to insure their preservation. Following a comprehensive study, a bureau wide project is being undertaken on a state-by-state basis for pulling together all field notes relating to a township and placing them in microfilm aperture card form. Field notes are arranged in Township and Range order for easy reference and use by the general public as well as Bureau employees. After the microfilm project is completed, the original field notes will be retired to the National Archives.

Status Records

All transactions concerning the public domain are indicated by land descriptions called status records. In searching title, status records are the initial step in determining vacant public lands or identifying the file or case designation of a transaction that has affected a specific area. Originally, the basic status records were tract books and copies of the official plats of survey on which title notations were made. Under the New Record System, described below, changes have been made in status records for most western states.

^{1/} 43 U.S.C. 53-56.

Control Records

Control records consist of copies of patents, public land orders, Acts of Congress, Executive Orders, or other actions which restrict or authorize the availability of public lands and resources. Most of these records are maintained in the Washington, D.C. area.^{2/}

Case Records

Individual files covering each transaction that has affected the public domain land and resources are called case records. There are over 10 million cases which occupy approximately 70,000 cubic feet in the National Archives and Records Service in Washington, D.C. Individual cases are consulted daily by bureau personnel, and requests for information contained in these cases from outside sources are continually being received. The index reference to these cases is generally found in the status records.

Security of these four groups of records is vital in preserving the basis for title in public domain states. An effort to preserve survey records, status records, and control records is made by continuously updating the microfilm system. Case records are systematically transferred to record centers as transactions are completed, and when appropriate, are taken into the National Archives.

New Record System

Growth of the conservation movement and the adoption of multiuse principles has required additional notations in the status records. The tract books - many of them over 100 years old - were so cluttered with handwritten entries that they were becoming illegible. In addition, the ravages of time and constant use had deteriorated the paper in these books to such an extent that with continued use, the status information would obviously be lost. The Mineral Leasing Act of 1920, and the volume of oil and gas applications that followed, completely saturated many of

^{2/} Memorandum of October 23, 1969 from the Assistant Director, BLM to the Solicitor, USDI, enclosure V.

the tract books with leasing information. These books were primarily designed to record dispositions of public land and did not anticipate the multiuse management activities that have developed.

In 1945, studies were initiated to develop a replacement for the tract book system and, following congressional authorization, installation of a new system was begun in 1955. By 1969, the new record system had been installed in Alaska, Oregon, Montana, Wyoming, Utah, Nevada, Arizona, Colorado, New Mexico and most of Idaho. Also, it had been installed for areas with greatest public land activity for North and South Dakota, Nebraska, Kansas and Oklahoma. Idaho and California are planned for completion. Extension of the new system to other states depends on priorities yet to be established.

This new system involved replacing tract books with a chronological narrative record of all transactions affecting an individual township. This record is referred to as the Historical Index. Copies of the status plats with title notations were replaced by a master title plat which contains the descriptions necessary to identify the smallest subdivision within a township and graphically shows all areas affected by a transaction including the necessary case designation. Copies of the master title plat are used to show all leases or use actions which affect the current status.

These new records are self-perpetuating because as status changes occur, a new updated copy of the basic record replaces the old copy. Quick reproduction of the new records is a major feature of the new system so that copies can be made immediately to meet either internal or external needs.

To supplement the new status records, a file of microfilm copies (in aperture cards) of all documents that control the availability or disposition of public lands and resources are arranged by township. This file is referred to as the Control Document Index and makes copies of the Control Records available in BLM land offices. These records are needed for the administration of the lands and resources in each state.

This system is continuously refined and the system modified as new microfilm techniques are developed. Microfilm copies of the status records are now being used in several land offices by the public for their research. Copies of the microfilm are also furnished to district offices for management and public use.

If an ADP-supported land and resource management data system is adopted by BLM, it will provide opportunity for further improving maintenance and use of land status records if it meets the requirements for transmission and graphic display of status information. In this regard, the use of computers and microfilming in various combinations appears promising.^{3/}

Working Survey and Ownership Records Maintained by the Principal Public Land Agencies

There is no central point in the Federal Government for maintaining records for Federally-acquired land similar to those maintained by the Bureau of Land Management for Federal public domain. Each agency keeps its own evidence of title and records of purchase, and the local government records show that the United States acquired the land.

This section of the study is a summary of the way principal public land agencies maintain their "working" records for the lands they control (both acquired and withdrawn public domain lands) and their boundary and corner monumentation activities.

Bureau of Land Management

In addition to its responsibilities for keeping records on all public domain lands, the BLM is responsible for records on Land Utilization Project Lands acquired under the Bankhead-Jones Act by the Department of Agriculture but under BLM control. Records for these lands are kept by the Land Office Division of the BLM State Offices (including title folders moved from Agriculture for the LU lands).

3/ Ibid., enclosure III.

The Master Title Plats graphically show the current status of both public domain and acquired land. However, a separate historical index for acquired land lists, in chronological order, all transactions that have affected those lands since transfer of administrative jurisdiction to the Bureau.

Identification of boundaries and corners is a continuing program carried on by BLM. Although BLM does not have an inventory of the needs for boundary surveys, an inventory is in progress that is estimated to be completed early in the next fiscal year.^{4/}

Forest Service

A land status system has been developed by the Forest Service and a program is underway to produce a status record which gives land administrators a reliable basis for resource development and cooperating with adjoining owners. In converting to this system, all land records are researched and the information entered in the new system. This system is about 60 percent completed.

As stated before, the Bureau of Land Management maintains the official records of the public domain lands still in Federal ownership. BLM is given prompt notice of easements for rights-of-way on public domain. However, special uses or rights-of-way covered by permits may not appear in BLM records.

The Forest Service status record system for both public domain and acquired lands includes such information as a Land Title and Encumbrance Map which shows the location of government-owned land, related encumbrances, easements on private land, or private easements on Government land. Attached to it is a tabular record which provides a description of the land involved and key facts regarding title or encumbrance matters. Unpatented mining claims

4/ Telephone conversation in February 1970 with G.D. Voorhees of the Division of Cadastral Survey.

are not usually shown; locations filed with county recording office often are not complete and reliable.

Another item included in this system is a Use Restriction Map and Tabular Record. The use restriction record portrays the legislative and administrative actions which do not affect the title of the land, but restrict use and administration. Also included is a basic information sheet which contains key data regarding the title and any encumbrances and restrictions on a parcel of land. Such a sheet will be maintained for each parcel of land involved in the status system. Eventually, information from the basic information sheet will be placed on automatic data processing (ADP) cards to form a punchcard record.

Finally, the status record system maintains a map and tabular record of road rights-of-way obtained by the United States across private lands and rights-of-way granted by the United States across Government lands.

When conversion is completed, all records will be maintained in applicable regional offices and furnished to all field units. In this way, all current changes in ownership, withdrawals, reservations, court decisions, decisions of the Bureau of Land Management, Acts of Congress, Public Land Orders, etc., will be incorporated immediately in the records for use and guidance of national forest administrators, users other than public officials, and the general public. The recent level of financing for the status conversion project and current maintenance has been about \$530,000 per fiscal year. At this level of financing the job should be completed in 1976. After the project is completed, a reduced level of annual financing will be necessary to maintain the records.

The State of Michigan presents a special land status problem. In a series of exchanges with the state, the United States reserved the minerals in selected lands conveyed to the state. As a result, the United States owns the mineral interests in some 236,000 acres outside the national forests. Gas and oil leasing is currently

increasing in the general area and potential lessees are on notice of the interests of the United States through reservations recorded in county records. The Forest Service has a file record of deeds, but no ready status records covering the reserved rights. After the status conversion job is completed on the national forests in the northeastern region, a status record will be compiled for these interests. The Bureau of Land Management, however, depends on potential lessees consulting county or other records before applying for leases. After reviewing the application, the BLM then requests a report from the Forest Service. There is need for a status record covering these interests so that administrators can protect the interests of the Federal Government.

Land administered by the Forest Service is often intermingled with land owned by others in complex ownership patterns. Increasing land and resource values and intensified management activities by both the Forest Service and adjoining landowners have resulted in a multitude of property line problems. In addition, unknown, uncertain or erroneous property lines seriously hamper the effective development and use of land and resources. Uncertain property lines prevent the Forest Service (and affected adjoining landowners) from fully contributing to development and growth of the rural economy.

More than 272,000 miles of property lines, involving 1,160,458 property corners, are estimated to be needed to define the property lines between national forest and the adjoining lands of an estimated 3/4 million landowners. It is estimated that another 210,924 additional controlling corners must be located, bringing the total corner location needs to 1,371,382.5/

Only about one-tenth of the Forest Service property lines is adequately located and marked. In 1958, the Forest Service began a program designed to locate property lines. This program includes searching for valid corner

5/ Staff Paper on the Forest Service Cadastral Engineering Program, dated August 7, 1968, by D.M. McVey.

markers and evidence that markers are missing, and noting where resurveys are needed. In addition, it will involve remonumenting damaged or in-distinct corners, surveying to reestablish lost corners and establish new corners, clearing, marking, and posting property lines between valid corners, and providing for protection and maintenance so that these property lines and corners will not be lost or obliterated. At the present rate of accomplishment, it will take 83 years to finish the remonumentation and over 200 years for the surveying.^{6/}

National Park Service

When public land is transferred to the National Park Service by proclamation, Executive order or act, a file jacket is made and a deed number assigned. All available material on this transfer is filed in this jacket. When acquisition (donation, purchase, exchange, declaration of taking, etc.) of land is completed, the field offices send all title documents to the Division of Land Acquisition. Upon receipt of these documents, the records are microfilmed and forwarded to the Federal Records Center for storage; nearly 10,000 deed jackets have been accumulated to date.^{7/}

By compiling information from numerous sources, the Park Service maintains Land Status Atlases for each area showing the relationship of ownership, i.e., Federal, non-Federal and state. Contact is maintained with BLM Land Offices for current master title plats, historical indices, copies of original patents and school indemnity lists for land status studies. As of 1965, boundary lines in more than 100 park areas had not been properly established or suitably monumented so as to enable ready identification.^{8/} New areas added to the National Park

6/ Ibid.

7/ Information enclosed with memo of October 15, 1969, from the Acting Associate Director, National Park Service to the Assistant Secretary, Public Land Management, USDI.

8/ Ibid.

System since 1965 continually increase the need for boundary surveys. Revised estimates as of July 1, 1969 show the need for 3,473.5 miles of original surveys, 1,747.5 miles of resurvey and the establishment of 29,395 corners on 109 areas. At the present rate of accomplishment, the surveying alone will take more than 40 years.^{9/}

Bureau of Sport Fisheries and Wildlife

Land ownership and status records are kept in the Division of Realty and consist of four types of records. Status maps are maintained for each installation administered by the Bureau. These maps show each individual tract of land (identified by number), whether public domain, acquired, leased, etc. and outgrants.

Acme card file contains an individual, numerically filed card for each tract of acquired land administered by the Bureau. Data on the card includes tract number, name, acreage, cost, and type of acquisition. Public domain lands are listed by Executive order or public land order on a single card for each installation.

Case files are maintained for each individual tract of acquired or leased land. Case folders, filed alphabetically, contain a copy of the deed, title opinion, survey description and plot, purchase contract, tract appraisal report, and other pertinent information.

Title files are the master files for acquired land cases and are generally filed in GSA record centers upon completion of acquisition. These files contain all title and payment vouchers.

Land surveyors of the Bureau survey boundaries (and monument corners) that are common to private property being acquired and other private lands. In the absence of identifiable and firm evidence of original surveys, full consideration is given to the lines and corners recognized by private owners as evidenced by roads, fences, marked

9/ Statement of December 31, 1969, supplementing previous information from the National Park Service.

lines, or established usage. Detailed field notes, and a plot for each tract comprising a detailed graphic description and a formal survey description are made. These records are kept in the Division of Engineering and are available, under departmental regulations, to Registered Land Surveyors who are making private land surveys adjacent to Bureau areas. Plots are filed for record in some states at the time the deed to the United States is being recorded but not many states have a plot filing requirement.^{10/}

Although establishment of lines and corners common to public domain land is a function of the Bureau of Land Management, Bureau surveyors may under certain conditions and upon timely notice to BLM officials retrace such lines. Findings are documented and reported to the BLM, but obliterated and missing legal corners are not reestablished and no monument is set that would identify a corner location as being a public land survey corner.^{11/}

The Bureau does not have an inventory of current needs for boundary surveys and corner location and monumentation. Officials report there is a substantial backlog of need, especially in the "wetlands" (waterfowl production areas), and for acquired lands at the older installations.

Department of Defense

The Chief of Engineers maintains records of acquired and public domain land acquisitions and disposals at Army and Air Force military installations and civil works projects. These records include copies of acquisition documents (except deeds and other title papers which are on file in the Office of the Judge Advocate General), lists of former owners, areas acquired and acquisition costs. Where applicable, records include copies of Executive orders and Public Land Orders extracted from the Federal

10/ Letter of October 15, 1969 from the Assistant Director BSFW to Karl S. Landstrom, Staff Assistant for Public Land Management, USDI.

11/ Ibid.

Register, original transfer documents evidencing transfers of land between DOD and other Federal agencies, and copies of use permits and licenses. Statements indicating the extent of legislative jurisdiction exercised by the United States and maps showing boundaries of interior tracts and exterior boundaries of the installation or project are part of the records. Also included are records of disposals, including reports to the disposal agency and deeds evidencing final disposal.^{12/}

All deeds and other title papers are filed in the Office of the Judge Advocate General. These include papers relating to transfer of land from other Government agencies (except originals or copies of leases, licenses or permits) and papers which vest jurisdiction of land in the United States.^{13/}

There is a somewhat informal working policy not to survey and monument military held land. Funds are not included in the budget for surveys on the theory that it is cheaper to take care of individual situations when they occur than it is to make complete surveys of holdings.^{14/}

The situation is much different with regard to land held for civil works. Problems of encroachments on civil

12/ Army Regulation 405-10.

13/ Ibid.

14/ Telephone conversations with (1) Mr. Grenwis, Real Estate Directorate, Office of the Chief of Engineers, Army, October 14, 1969, and (2) Colonel Roberts, Lands Division, Office of the Judge Advocate General, Army.

works projects have increased the need for surveys on such projects. There are numerous instances where houses are built that encroach on Federal lands at Corps work projects. Often a developer sells land to individuals, who unwittingly erect structures that encroach on Federal holdings. Since there are many problems other than land involved in such encroachments, it is Corps policy to establish and mark boundaries and corners prior to acquisition for new projects and to do so on other lands as resources permit. The same policy prevails with respect to deteriorating corner markers.^{15/}

The Navy Department uses the term "Cadastral Records" to describe the ownership and status records it retains. Examples of cadastral records are records of condemnation proceedings, deeds, plats, abstracts or certificates of title, leases, licenses and permits. Disposal papers are also included.

Retention of the originals of title papers is the responsibility of each Naval District having official custody of those papers for lands in its jurisdiction. Microfilms of the title papers are retained by the Naval Facilities Engineering Command at Navy Headquarters.^{16/}

Each Naval District prepares a real estate summary map for each of its activities along with perimeter descriptions and information about each acquisition. Public land withdrawals are also shown on these maps.

Standard surveying and monumentation procedures for Navy Department installations require that any property

15/ Ibid. Also, conversation in October 1969, with Mr. Huppuch, Planning Division, Directorate of Civil Works, Office of the Chief of Engineers, Army.

16/ Letter dated October 17, 1969 to the PLLRC from Captain R. E. Dunnells, Assistant Commander for Real Property Management, Naval Facilities Engineering Command, Navy.

proposed for acquisition must have a survey of exterior boundaries, including monumentation, a plat of the area surveyed, and a copy of the surveyor's notes if considered desirable. At established installations, all boundaries are to be resurveyed and boundary corners monumented, except those involving large holdings of public domain, as funds permit.

CHAPTER III

AVAILABILITY OF INVENTORY INFORMATION AND THE ADEQUACY OF AGENCY DATA FOR PUBLIC LAND LAW REVIEW COMMISSION STUDIES

Federal agencies were most cooperative in identifying and providing available information for PLLRC studies, and made an effort to supplement or adapt it to make it more useful for particular needs. However, some information had deficiencies or limitations which affected its usefulness and some was simply not available.

This chapter summarizes the observations and experiences of staff members who worked with contractors in developing studies or conducted staff studies which required working directly with agency representatives to locate and evaluate information. Their comments are limited to those kinds and classes of information (usually statistical data) which were necessary or useful for one or more of the following purposes:

1. Analyzing policies and programs.
2. Land use planning and zoning.
3. Program planning and budgeting.

No effort was made to differentiate between inadequacies in information which would affect agency program administration need and those which would affect decisions at the congressional or Executive Office levels.

General Problems and Deficiencies

Some problems encountered, and deficiencies in available data, were common to all Public Land Law Review Commission studies. This section lists some of these common problems and discusses their effect on the studies.

Statistics are not kept separately for section 10 lands.

Only real property inventories and certain other statistics for land areas administered by agencies show public domain and acquired acreage separately. It has not been the practice for agencies to keep other types of statistics separate by type of land acquisition so that no distinction was readily available between the resources of section 10 public lands and those for other Federal land for Commission studies.

Since separate accounts have not been maintained on section 10 lands, estimates were used for portions of the various resources or commodities to be allocated to each type of land. For interspersed areas of public domain and acquired land, it is difficult to estimate the production attributable to each, even for fixed commodities such as timber or forage. It is even more impractical to allocate items such as visitor use of recreation areas or wildlife production between adjacent areas of section 10 land and other federally controlled land.

The Commodity approach of the Commission's studies is not usually identical to agency missions.

The format and manner in which records are kept by agencies is dictated by the program and record keeping policies of the agency and did not usually conform to the commodity approach of our studies. Thus, where an agency program involved multiple uses of administered areas, no provision had been made in record keeping to show the administrative costs for each or to provide any breakdown in the benefits provided by each of the uses.

Records of Federal ownership, administering agencies and breakdowns by study units are incomplete and misleading.

Differences in the acreage of Federally-owned land administered by an agency are almost as numerous as the sources from which such acreages can be obtained. Most differences are minor but some of them involve tens of thousands of acres. These differences are often due to

the inclusion, or exclusion, of leased lands, option lands, managed lands, or lands operated under permit, letter of understanding, or secondary withdrawal.

Difficulties in obtaining data by counties and states.

It was difficult to get data by census regions without basic research. In some agencies, the regional organization ignores the state as an operating or statistical division. For some studies, it was desirable to obtain resource inventory statistics on a county unit basis. The real property inventory lists ownership by county locations, but in many instances, multiple county locations are grouped together under one code number. A single such instance negates the possibility of determining county unit data for a particular category.

Neither the inventory of real property nor other available records gave the current market value of Federal lands within a county which is the only value measurement that is pertinent to the evaluation of a system of payments in lieu of taxes.

Usefulness of General Services Administration annual inventories of real property owned by the United States.

Although these inventories are the most comprehensive of all sources for areas of land administered, their usefulness for Commission studies was impaired by:

1. Duplications: More than one agency reporting administration of the same area.

2. Limitations in programming: For several years, the Bureau of Land Management has manually extracted data on acreage administered by different agencies by states for its annual publication.

3. Limitations in data obtained: Data are complete for states only with no breakdowns by functions that are useful in the "commodities" approach. No values are given for public domain and the acquisition costs for acquired land are not informative.

Deficiencies in the Inventory compiled by the House Committee on Government Operations.

This report contains estimates of the value of the public domain and donated land in each state along with the total acreage of Federally-owned land (and its acquisition cost) by states and by agencies as reported by GSA in its real property inventories. Additional information provided on the value of public domain and donated land was of limited usefulness because it was obsolete for some agencies, and could not be applied to units smaller than a state. Also, there were variations for some agencies in the acreage reported for public domain in this report and those listed in GSA inventories.

Usefulness of Public Land Statistics.

This publication is issued annually by the Bureau of Land Management and contains summary tables of data obtained from GSA for the previous year. Summaries are broken down between public domain and acquired land and list the acreage administered by agency for each state. Also, listed by state are the areas in national forests (provided by Forest Service) and the public lands under the exclusive jurisdiction of the Bureau of Land Management, for a year later than the agency data from GSA and are not identical. In addition, data in this publication on acreage administered frequently disagree with other Federal agency publications, making such information confusing to other users of the data.

Lack of uniformity in compiling data.

Variations in record keeping from agency to agency were the rule rather than exception. Although such

variation was expected, it proved extremely difficult to obtain data requested from the various agencies in a form which would be combined and summarized. Part of this variation was due to terms and definitions not being identical. For example, agencies do not use uniform methods for estimating recreation visits or visitors. There are also differences in the definitions for commercial forest land, range, or crop land. The term "public land" has several meanings other than the section 10 definition.

Different units of measure are used in reporting quantities of commodities produced or sold. Gravel is sometimes reported in tons, and at other times in cubic yards; timber was reported in board feet, cords, and cubic feet, depending on product produced.

Other variations concern methods for determining and recording values of commodities disposed through material sales or free use permits. Some agencies could provide a dollar value, while others could not. Reporting periods varied between agencies and within an agency, but the most common variation was between fiscal and calendar years. It was rather obvious that some agencies exercised extreme care in obtaining estimates on a county-by-county or even smaller operating unit basis, whereas other agencies made aggregated estimates. There were wide variations in the base from which estimates were made. For example, methods for estimating visits or visitors to recreation areas ranged from actual head counts to use of road counters for spot estimates on specified days.

For most commodities it was especially difficult to obtain comparable data for any extended period of time. Report formats or reporting periods were often changed by the agency during the period for which data were desired. Even though most changes were to improve the report format, they handicapped comparison of data over time.

Often where data were found in the desired format, only aggregated summaries were maintained in Washington offices and it was necessary for the agency to obtain data from some field level. Sometimes disaggregations in the field could be made on an estimated basis only, because the primary records had been disposed of, or had never been compiled.

Specific Problems and Deficiencies

The previous section dealt with problems common to all studies. This section discusses those problems associated with the specific commodity and use areas encountered in the various Commission studies.

Acquisitions and Exchanges

1. Records for acquisition costs of fee or less than fee interests are not reported annually by some Federal agencies or are reported in such a way that the cost of each category cannot be easily identified. Neither the Bureau of Sport Fisheries and Wildlife nor the National Park Service make periodic reports of costs involving purchase of fee title or less than fee simple interests.

2. Reporting to central offices of acreage and costs of land or interest in land acquired is not uniform among various Federal agencies. The types of acquisitions are not reported in categories that will allow them to be readily combined into an overview of the total Federal acquisition program.

3. No Federal agency maintains a record of all costs associated with the purchase, exchange or donation of land or interests in land. The record of acquisition costs is confined to the purchase price. Administrative costs, such as those for analysis of benefits, survey, appraisal, negotiation, securing title evidence, clearing defects of

title, reviewing, rendering of title opinions and processing payments, are not identified or estimated. Without these costs, current data are inadequate for policy consideration, or for program planning and budgeting.

Alaska

Limited basic data were available for Alaska resources. Statistical data on the public land resources of Alaska are quite sketchy due to the limited Federal efforts made to finance and complete cadastral surveys and the lack of authorized programs. Deficiencies are most glaring with respect to timber and minerals which constitute such large portions of the resource base. Timber survey costs are not considered justifiable for much of the forest land until there is a need for products of presently nonmerchantable timber stands.

Economic Impacts

Availability of Statistics

1. Few statistics were available for measuring economic impacts of the Federal lands on local economies. The missions of the agencies have not required them to take into account the impact of Federal ownership and Federal programs. Consequently, they collect little or no data that could be built into specific models for measuring such impacts.
2. Production data for public lands were not available on a small-unit basis. With respect to the Upper Colorado Basin, production by county was needed in order to aggregate sub-basin totals. In many instances, this involved quite a bit of guesswork and approximation. Regional field records were not especially helpful.
3. Cost and value information was extremely limited on a local basis. Differences in manner of reporting were

quite common. Practically no information was available on geographical patterns of distribution of outputs from public lands.

4. For purposes of projections, data concerning land productivity were required for specific uses. These were generally unavailable and simply projected on the basis of past trends.

Environment

Awareness of environmental deterioration has only recently become popular. No agency or organization, public or private, has generally studied changes in environmental quality for any length of time. Some trends for water pollution for some drainage systems are available but specifications for measuring these trends have also changed over time. Assessments of soil erosion are few and too widely scattered to have any value for a general analysis. Neither definitions of most aspects of environmental quality nor systems for measuring quality are currently operational. As a result, historical and even recent changes in environmental quality have to be inferred from other data.

Fish and Wildlife

Area data on various species of wildlife.

Little information is available on the extent of game habitat on Federal land of all jurisdictions. There has never been an effort to make an accurate survey of the acreage and location of the habitat for the various species. Estimates are particularly weak for the smaller animal forms and nongame bird species.

The production of fish and wildlife from section 10 lands.

Good estimates of big game and waterfowl harvest are available in the vicinity of public lands but accurate proration of production to the public lands is not possible

with current level of habitat inventory information. Estimates of production of other species are without firm basis.

Potential value of Federal lands for wildlife production unknown.

Practically no information is available on the potential value of Federal lands for the production of wildlife and for wildlife habitat. Although much is known about what improvements are good for wildlife, accurate estimates of existing populations and the changes which could be expected with different types of improvement of fish and game habitat on public lands is unknown.

Lack of economic values for the wildlife resource.

Good information is available on fishing and hunting license revenues, but the contribution of wildlife to the economy of any given area is largely unknown, much less the contribution Federal lands make to the economy by supporting wildlife populations.

Forage

Nature of livestock enterprise using public grazing lands.

1. For individual firms, land management agencies do not maintain records on the types of farms or ranches or their characteristics, such as the size, gross business, product mix, dependence on public lands, and other features, which should be considered in determining grazing policies on public lands.

2. Federal land management agencies cannot readily report how many individual firms use the public lands. Records are kept on the number of permits only with no record of how many permits any one firm holds or how many permits that firm may hold with other Federal agencies.

3. Because of deficiencies noted in 1 and 2, agencies cannot recognize trends in the size of ranching firms or determine dependency on Federal public grazing lands and thereby meet the changing needs of rancher users.

Extent and quality of the public land forage resource base.

1. Federal land managing agencies are unable to provide statistics showing the acreage of land "chiefly valuable for grazing;" i.e., land characterized by perennial grassland with few or no trees, suitable only for grazing domestic livestock.

2. Federal agency rangeland improvement programs have apparently not progressed to the point where they can pinpoint areas that need rehabilitation and what the costs and benefits for such programs might be. Both the Forest Service and Bureau of Land Management were asked for this information but were unable to provide it.

3. Use of figures for investment in "range improvements" could be misleading. Although agencies list contributions by both the agency and private individuals for range improvements, it is not clear just what kind of improvements are being reported. If the bulk of private investment is for corrals, roads, fences, dipping vats and similar "improvements" while agency expenditures are for reseeding, control of noxious plants, and other measures designed to increase forage production, they should be reported in that way. The term "range improvements" has different meanings depending on who uses it. Agencies should be careful to show the nature of expenditures and avoid lumping them into one category.

Information on actual use of public lands for grazing by both domestic livestock and wildlife.

1. Allocations of forage for wildlife must be largely "guesstimates." Federal agencies apparently do not have

reliable figures for wildlife populations using Federal lands. If progress is to be made toward eliminating competing uses of forage in key game areas, better methods will have to be found to assess these populations.

2. Information on the influence of domestic livestock on some upland game birds and other small wildlife is lacking so that impact on these species as a result of grazing cannot be assessed.

Future Demands

Lack of Information.

1. There was a lack of consistent production/use data for most commodities which was a result of incompatible methods of reporting by several agencies.

2. Almost no meaningful information was available on productivity of public lands in relation to possible future production. In addition, there was no valid cost information on development of production potential.

3. The level of aggregation geographically as well as by broad product categories presented problems. Often it was not possible to develop trends on the basis of specific commodities (Peeler vs. Sawlong, for example) or for local economic markets. National (and regional) aggregates were extremely limited in usefulness.

Intensive Agriculture

Permitted use for agricultural crop production.

1. Although cropland rental rates greatly exceed those of rangeland, the Corps of Engineers makes no distinction in their reporting of such land where one

individual leases both types of land, the total acreage and receipts may be reported as livestock grazing or agriculture depending on the acreage in each use.

2. For all Federal agencies (except the Navy Department), agricultural leases do not specify irrigated or dryland, or the type of crop (except whether it is price supported or not).

3. Although the Bureau of Land Management does not normally issue permits for intensive agriculture, some are issued and carried as special use permits (in Public Land Statistics), but not identified as to type of use.

4. Forest Service permits for agricultural crops are reported for biennial periods only and no information on receipts for such use was available. In addition the basis for setting fees for this use varied by region so that estimates of revenues could not be made.

5. The Department of Defense does not maintain information on agricultural outleasing beyond the current fiscal year so that trends over time cannot be assessed unless records are secured from Record Centers or from Regional or District offices.

6. Bureau of Sport Fisheries and Wildlife programs for wildlife refuge management include a provision for allowing private individuals to farm certain areas under a sharecropping arrangement. Since no charges are involved and the Government's share is normally left in the field, the Bureau is not able to accurately assess the effectiveness of such arrangements, costs and returns to the Federal Government and the contribution of these programs to the agricultural economy.

7. The exact acreage of Federal land leased or permitted for agricultural crop production and the receipts for this use in any one year are practically impossible to obtain.

Lack of land classification.

Lands administered by the Department of Defense have not been classified and many have not even had the soils mapped. Until the Soil Conservation Service estimated the acreage of the Department of Defense lands that were suitable for intensive agriculture, no one was aware that nearly 5 million acres fall in this category. Since lands in this type use are at times declared surplus because of closing military bases, it would be helpful to know what values these lands have for other uses as well as expanding the knowledge of the Federal natural resource base.

Land Grants to States

Record keeping system for administering state land grant program.

1. In the Commission's study of Land Grants to States, requests to the Bureau of Land Management for the acreage of unsatisfied land grants on two different occasions resulted in two different acreages for the same states without intervening grants. In addition, the states were asked for their record of unsatisfied grants which resulted in a third acreage figure.
2. Although land grant legislation was very specific as to acreage, Bureau of Land Management records show that some states received up to 4,000 acres more than they had coming to satisfy the grant for a particular purpose while other grants to the same state are unsatisfied. Reason for these grants in excess of that provided for in the legislation are unclear, but a poor record keeping system appears to have been at least partially to blame.

Responsibility for enforcing land grant provisions
in states.

1. Congress did not provide for supervision of land grants for various state purposes and as a result, states have disposed of lands and/or permanent funds which were supposed to be maintained permanently. No provision was made for records to be kept by any Federal agency to insure that the states comply with the will of Congress.

2. Legislation authorizing land grants did not indicate the latitude states had in subsequent actions involving such lands. Therefore, some states conveyed their grant lands to the counties so that the states no longer know where the lands are, how much is still owned by the counties and the status of any funds resulting from land sales. If Congress wanted to know what the states had done with lands in this situation, there would be no way to determine it without a detailed research study.

Minerals

Reserved mineral interests.

The Bureau of Land Management does not compile and report an inventory by states of the lands in which the United States holds only a mineral interest. A state-by-state record of the acreage with retained mineral interest was kept through 1948, but was discontinued at that time. Since 1948 each BLM state office has continued to maintain current records of surface ownership and minerals reserved to the United States. However, BLM reports only U.S. totals for the additional acreage in which minerals are reserved, on an annual basis, showing whether the reserved mineral interest was for all minerals or for coal, oil and gas, phosphate, and combinations of oil and gas plus other minerals and miscellaneous minerals. These yearly totals provide a national figure of minerals reserved to the United States.

Neither the Bureau of Land Management nor the Geological Survey reports whether reserved mineral interests are mineralized or not.

Mining claims on public domain.

The Bureau of Land Management, the Forest Service and any other agency administering section 10 lands subject to mining location do not record or report unpatented mining claims located on lands they administer. Likewise, no Federal agency has a record of the quantity, grade or value of the production of minerals from unpatented claims located under the Mining Law of 1872. Recordation of claims or notice of claims is affected by state law only in the state where the claim is located. State recording requirements for claims vary widely from state to state in kind and degree.

Mineralization and geology.

A recent publication reported that only about 24 percent of the 48 contiguous states and Hawaii has been adequately mapped geologically (21 percent of Alaska has been mapped).^{1/} Land administering agencies do not keep systematic records of the known mineralization of public lands, nor of public land areas suspected of being mineralized.

Federal agencies do not keep composite records of mineral exploration efforts conducted on their lands, e.g., area explored, nature of exploration effort, nor of the results of such efforts under the location system.

Mineral sales and free-use permits.

Under the Materials Disposal Act of 1947, wide latitude is allowed to the administrative agency involved in the disposal of mineral materials from the public lands

^{1/} Geo. Times, Vol. 15, No. 1, 1970, p. 18.

under its jurisdiction. The result is that correlative records of sales and free-use permits between agencies as to kind, amount and value are lacking.

Outer Continental Shelf

Although the Geological Survey does not publicly report the production amounts and values, by lease of minerals (oil, gas and sulphur), which are produced from the Outer Continental Shelf, such data are available for public inspection in the adjacent state mineral conservation board offices where production records are kept by lease. The Geological Survey is not required to report these data because this information is specifically exempt from the Public Information Act.

Recreation

Recreation use.

1. Collection of recreation use data by Federal agencies in the past has been inadequate to provide accurate series information from which demand projections can be made. This has been the result of nonuniformity in the definition and measure of recreation use among agencies and internal inconsistencies within the agencies. With the exception of national park admissions, only recently have general attempts been made to collect recreation information directly rather than to use information that is a by-product of other information collection programs or based upon estimates.

2. Measures of recreation use are also deficient for planning and managing purposes. Recreation visits and visitor days, the two most common measures, do not reflect characteristics such as number of different visitors, length of visits, seasonal time of visit, activities engaged in during visit, number in group, age and sex make up of visiting group, which are essential for efficient planning for new recreation development and management of existing facilities.

3. Usable techniques for projection of recreation demand (as opposed to need) that relate economic, sociologic and demographic characteristics to resources should be in use soon. However, the utility of the products of such analytical techniques will depend on the accuracy and meaningfulness of the measures of recreation use.

4. Concepts describing the value of recreation use for an area still are not formulated. Aspects to be considered include value to the user, to the immediate region and the nation; induced income, cash flow at site, or total expenditures for equipment and other expenses; value in nonmonetary terms. The interrelationship of these concepts is also not known. Measures of value, whatever the concept, are the least available of all recreation information.

Recreation potential.

Measures of land characteristics that reflect recreation potential are still rudimentary. BOR's recreation land classification system is uninformative on critical aspects of land characteristics that have recreation significance. For instance, most of the section 10 lands fall into BOR Class III, (nonurban, undeveloped areas with minimum recreation facilities) so that a planner has no idea of the recreation potential of the land from such a classification. Distance to population centers, topography, climate, plant cover, wildlife, ownership, and other characteristics critical to recreation potential are not reflected in the total of acreage in this category. Meaningful measures of recreation potential on public lands and an accurate inventory of the potential are needed.

Revenue Sharing

Lack of real property values.

Current market value of all Federal lands is not available anywhere. Until it is, no broad system of payments in lieu of taxes can be considered, much less implemented.

Trespass

Records of costs of prevention, detection, investigation and settlement.

Federal agencies in general do not maintain records on the cost of detection, investigation and settlement of various types of trespass cases. Neither the cost from administrative funds or from funds expended by the Department of Justice for setting the case are recorded. Cost information appears to be inadequate for analysis of trespass policy and for program planning and budgeting which would achieve the greatest effectiveness.

Inventory of boundary marking needs.

There is no current inventory of surveying needs to establish boundary lines between BLM and other land which will require marking and corner monumentation or remarking and remonumentation. As a result, programming and budgeting for needs in this area of work would be impossible.

Use and Occupancy

Data on acreage of lands disposed of for occupancy purposes.

1. Records are not maintained by most agencies on the types of occupancy uses for which lands are disposed. While some disposal laws are strongly indicative of a particular use, a number of uses are generally possible under each law and estimates can be made only of the acreage in each use. In other instances the land disposal laws give no clue as to the occupancy use. A complete inventory of land disposed of for any particular use is not possible from current records. Availability of such data are inadequate for analysis of land disposal policy considerations.

2. Records of land disposed of for occupancy purposes do not permit a summation of acreage by state or census division or any other geographic region. The geographic regions for which such information is available differ between agencies.

Data concerning acreage of retained land used for occupancy purposes.

1. There is no common definition recorded among agencies for single uses or categories of occupancy on retained lands. This makes it impossible to determine the total impact or trend for any particular use with current record systems. Some agencies group uses or fail to identify them so that uses may be analyzed separately. For example, the Corps of Engineers includes all rights-of-way in one category, regardless of type of occupancy use. As a result, information on categories of use can be obtained only by a detailed compilation of individual cases.

2. There is no uniformity in reporting periods for occupancy uses among Federal agencies. Some reports are on an annual basis, some are biennial, with some by calendar year and others by fiscal year. The Forest Service has maintained no summary report of uses under special use permit since 1965, pending completion of an ADP system. Present reporting on uses appears inadequate until the ADP system is operational.

Data on use.

Records are not maintained by any Federal agency on the impact of occupancy uses on other resource use.

Retention and disposal of use and occupancy records.

1. Records of use and occupancy are prematurely disposed of by some agencies. The Department of Defense maintains ADP tapes for one or two years only. Because of this, obtaining occupancy use data for earlier years is difficult, time consuming and costly. If the data are desired, they must be entirely reprogrammed and extracted from the previously prepared printouts.

2. The Bureau of Land Management can provide data on occupancy use under special land use permit for the most recent year only. An annual record of acreage in various occupancy uses is not maintained. Record of such use appears to be inadequate to establish trends and impacts for policy analysis and inadequate for land use planning and management.

Identification of section 10 land in occupancy uses.

A record of occupancy use on section 10 land has not generally been maintained separately from the occupancy uses on nonsection 10 lands. This has caused problems in aggregation of occupancy uses on the section 10 lands for the purpose of policy analysis by the Public Land Law Review Commission; however, the usefulness of separate recording of such information in the future is questionable.

Records on cost of providing for occupancy use of Federal land.

Accurate costs of establishing and maintaining vacation homesites are not recorded by the Federal agencies. As a result, costs are not available for policy analysis for such use of Federal lands. The subsidy, if any, for providing this use to this privileged group of users is unknown.

Inventory of retained lands under lease.

Several agencies do not maintain current inventory of the number of acres under lease for occupancy uses. Only the number of leases granted or which expire each year can be ascertained readily from the record.

Inventory of acreage and use of railroad rights-of-way.

1. No agency has current inventory of the miles or acres of railroad rights-of-way existing across public domain or section 10 land, and the status of the public interest on such land.

2. No agency has a record of the nonrailroad uses on the railroad rights-of-way or the extent of unauthorized use of such rights-of-way.

3. No inventory is in existence on the land within railroad rights-of-way which has been conveyed by the railroad companies for nonrailroad purposes without the consent of the United States Government. Such an inventory is not in existence for rights-of-way across either Federal or non-Federal land.

Use of natural areas.

No record is maintained by the Federal land managing agencies on the number of users or the types of use on natural areas.

Data on lineal occupancy uses.

An inventory of the area of public land occupied for lineal uses by easements or permits, such as for roads, pipelines, utility transmission facilities and water transmission, is not maintained by Federal agencies. Some agencies maintain an inventory of the miles of such uses but this cannot be easily converted to acreage occupied. The width of the rights-of-way varies making any estimate of acreage questionable. Trends in use and impacts from such use cannot be established from current records for policy analysis and land use planning.

Occupancy uses for which data are completely lacking.

No Federal agency maintains an inventory of known antiquities on lands it administers. Such data are entirely lacking.

User Fees and Charges

Adequacy of Information.

1. There was a lack of adequate time series information on levels of production for most commodities.

Inconsistencies in reporting, unexplained changes within agency reporting, and lack of comparability between sources were the rule.

2. In many instances there was a lack of meaningful data on unit prices, particularly for cases where competitive disposal or percentage charges were used. With exception of timber, unit fees were reported as straight numerical averages with no indication of variation.

3. There were instances of incompatible reporting of production or use on calendar year basis with cost/fees data on fiscal year making it impossible to draw meaningful comparisons.

4. Level of aggregation for certain types of fees prevented meaningful analysis. For example, lumping all uses under "special permits" precluded meaningful conclusions concerning trends in individual fees for specific uses. In addition, combining different sources for reporting is often a problem. Forest Service, for example, reported grazing and grazing trespass fees together.

5. In relation to aggregation problems, regional and/or state information was extremely limited. It was practically impossible to distinguish regional levels of fees in many instances, particularly those where competitive or percentage rates apply.

Water

Watershed management objectives.

Federal agencies administering watershed lands do not report areas and expenditures for increasing water yield separate from those for preventing soil erosion. When requests were made for watershed management areas and expenditures by type of practice, only items such as sheet erosion, gully stabilization and revegetation were

supplied. It is apparent that criteria have not been developed which allow Federal agencies to identify projects which provide the greatest benefit in value of water yield or quality. Such information is necessary for adequate programming, planning and budgeting.

Adequacy of consumptive use data.

1. Only the Forest Service indicated that its tabulation of recreation water use data included evaporation from reservoirs used for such purposes. Data from such agencies as the Bureau of Reclamation did not reflect any such figure. Although the Bureau of Reclamation permits recreation use on nearly all its reservoirs and maintains a permanent pool for such use in most cases, the evaporation resulting from these pools is not reflected in the magnitude of the data supplied for recreation water use. Since use is also made of water in most reservoirs for irrigation, evaporation from both recreation and irrigation impoundments must be lumped together. This could give the impression that all such evaporation is due to irrigation when in fact a good portion is due to recreation and should be reported as such.

2. Federal agency data on consumptive use by domestic livestock for 1967 and projected to 2000 indicates nearly twice as many animals will be grazed on Federal lands by 2000. The forage study shows that grazing use of Federal lands by domestic livestock has actually declined from 1947 to 1966. It must be pointed out that this increased consumptive use will only occur if the present carrying capacity is doubled through range improvements. Since an average of 86 percent of all Federal grazing land is reported as needing range improvement practices, it is doubtful if these practices will be implemented on all such lands by the year 2000.

Withdrawals and Reservations

1. There is no inventory or central depository of data covering the withdrawal and reservation of public

domain lands from which definitive information may be readily obtained to evaluate the extent and effect of the withdrawal process. If such information is desired, it must be obtained from the records of each holding agency in order to develop and compile reasonably precise data on the acreages withdrawn or reserved; the authority exercised to make the withdrawal or reservation; the purposes and restrictions imposed on the management and use of the land and the disposition of the land and its resources. To further complicate matters, agency records relating to withdrawals and reservations are not always centralized in one place and may be scattered around in Washington and in field offices.

2. The language used by the various agencies to describe withdrawal actions, purposes, and conditions and restrictions is frequently imprecise and varies from agency to agency and within agencies. In the State of California alone there are more than forty different descriptions in withdrawal orders for lands administered by the Bureau of Land Management.

3. Failure to use precise language in withdrawal orders along with centralization and control of withdrawals has resulted in duplication of reporting acreage withdrawn and administered by agencies. Two outstanding examples, involving considerable acreage, are located in Nevada and Arizona. In Nevada, the Nellis Air Force Range overlaps the Desert National Wildlife Range administered by the Bureau of Sport Fisheries and Wildlife by approximately 1,053,500 acres. In Arizona, a similar situation exists involving an overlap of about 825,440 acres reported by the Air Force for the Luke Williams Air Force Range and the Cabeza Prieta Game Range.

There are similar overlaps in reporting areas of real property involving less acreage in other instances.

4. Inventory material published by the General Services Administration and that contained in the Inventory compiled by the House Committee on Government Operations

provide little more information on withdrawals than the acreage of public domain which has been withdrawn for the use of certain agencies in each state. The material in Public Land Statistics on withdrawals and revocations standing alone is of little value. It reports the annual activity by general purposes only and since it is unrelated to previous totals, presents an inadequate picture.

CHAPTER IV
POLICY CONSIDERATIONS AND ALTERNATIVES

The previous chapters have discussed the record keeping and natural resource reporting systems used by Federal land administering agencies. In addition, an effort was made to identify discrepancies in agency records or programs and to discuss the inadequacy of and problems encountered in obtaining agency data for Public Land Law Review Commission studies. As a result of the foregoing analysis, these policy considerations have emerged:

1. Is there a need to change the present Federal land administering agency resource and use information reporting systems so that all will use the same administrative regions, terminology, format, reporting period and units, making such information fully comparable?
2. Have all public lands been inventoried to show those lands chiefly valuable for the various uses that could be made of them?
3. Is there a need for an assessment of the potential productivity of resources on public lands in relation to future need, within the limits of economic feasibility?
4. Should public land administering agencies be required to establish and maintain an inventory of environmental improvement opportunities?
5. Are public land cadastral surveys adequate to identify public lands and prevent trespass and other unauthorized use?

6. Would an electronic data processing system significantly facilitate determination of public domain land status and/or any mineral or other reservation, compared to the present tract book, patent record system?

7. Should public land administering agencies be required to inventory and rank resource development opportunities on the basis of marginal costs and returns?

8. Are present measures of recreation resource potential and recreation use adequate for program planning and budgeting purposes?

Analysis of Possible Alternatives

Alternative 1.

That a centralized record keeping and information reporting system be developed for natural resource and use data on all Federal lands.

a. Problems intended to resolve:

Under the present system of reporting public land resource information, it is impossible to assemble for any given date an inventory of public land resources and use. This is due to agency differences in administrative regions, terminology, reporting format, reporting time periods and other agency policies. At the present time, if any major change in public land policy were proposed, it would be impossible to determine the impact of such a change on resources, revenues, uses, etc., on all public lands. In addition, if any Congressman, public official or private individual desires information on a particular use of all Federal lands within a particular state or nationally, this information would be laborious if not impossible to obtain.

b. Key feature:

One master record system would be established and maintained by an agency designated by Congress. Such a system would require standardization of reporting periods, forms, terminology, units of measure and any other practice that would make all natural resource information comparable. After the system was operable, reports normally sent to the agency headquarters in Washington, D.C., would be sent in duplicate, with one copy forwarded to the new centralized record keeping agency. Reporting periods would be established which would best serve the needs of all agencies. As a minimum, however, all agencies would report on a fiscal year basis so that at the end of the fiscal year, all information would be available. This would facilitate the appropriation and budgetary process. Any additional reporting time period, such as the calendar year, would be at the discretion of each agency.

A logical by-product of this centralized system would be some provision for publication. One report could be issued each year which would show, in summarized form, all pertinent Federal land resource and use information. There may be adequate reason for reporting such information on a state, county, or census division basis and even to congressional districts, if the need exists. This publication would inform the public of all uses, resources, status and location of all Federal natural resources, shown by administering agency.

c. Advantages:

Such a system would enable Congress to gain an overall perspective of all natural resource programs at one time and compare expenditures for similar purposes between agencies. This system would allow Congress to identify inefficient programs, avoid duplication and formulate policies on a more rational basis than ever before possible. With increasing emphasis on natural resources and environment, this information will be most valuable for future planning.

d. Disadvantages:

A system of this magnitude and complexity would require a great deal of coordination and planning in addition to development of compatible record keeping systems within Federal land administering agencies. Although some agencies are developing electronic data processing systems, others have not, and even those who are would need to alter their systems to conform to a common reporting format. Implementation of such a system could change the basic data collection program of some agencies and result in a period of adjustment.

Any changes necessary in present record keeping and reporting systems would no doubt result in increased expenditures until the system was in operation.

Alternative 1a.

That each Federal land administering agency develop a natural resource information reporting system with format, terminology, and reporting period common to all so that such information will be fully comparable.

The problem intended to resolve and key features would be essentially the same as the main alternative except oriented toward each agency using common systems of reporting rather than the centralized system.

a. Advantages:

Adoption of this system, using either manual or electronic data processing, would make all Federal natural resource information at least comparable. Although not compiled on a national scale, such information could be gathered from two or more agencies and combined without manipulation. The common system of data gathering would make compilation of any Government-wide information much easier.

b. Disadvantages:

Some agencies may have to completely revise their present reporting system which could result in additional expenditures to set up the new system. In any case, it would take time and education to adjust to any new system. Even with systems presently in use, there does not appear to be any reason why this system could not be adopted.

Alternative 1b.

Structure the collection of all inventories and resource use on public land by state, county and census division.

a. Problems intended to resolve:

Administrative regions of Federal agencies with few exceptions do not coincide with states, census divisions or with one another. While there is often good reason for regions having differing geographical limits, data collected only by these differing regions prevents the compilation and display of data on public lands on any common geographical unit below the national level. For meaningful analysis and public policy decisions, collection of data is needed by geographical units common to all agencies. Under the existing system if data is needed by state or any other common geographical unit, it is often unavailable or very costly to extract. The usefulness of data which are collected on various geographical bases is greatly limited.

b. Key feature:

All Federal agencies would be required, as a minimum, to identify all real property inventory and resource data collected as to state, county and census division regardless of the geographical limits of their administrative units.

c. Advantages:

Data would be readily available on state and census division basis. The data would be consistently collected and compiled by the same geographical area for all agencies administering public lands making it much more useful and available for analysis. It would provide information more useful to the state governments, and others interested in data in a particular state or census region.

d. Disadvantages:

Identification of data by states would increase the cost of data collection by Federal agencies not currently doing this. Some of the cost would be offset, however, in decreasing the cost of responding to requests for information on states and census regions.

Alternative 1c.

Require all agencies to uniformly report all changes in land ownership or jurisdiction by type of change.

a. Problem intended to resolve:

Under the present system, the acquisitions and disposals are variously grouped in the different public land managing agencies. This makes it difficult, costly and time consuming to obtain data for analysis of land acquisition and disposal to bear on policy issues.

b. Key features:

All agencies would be required to report all of the changes and costs in land ownership and jurisdiction into the categories of purchase, condemnation, exchange, change in jurisdiction, and disposal.

c. Advantages:

This would provide for maintenance of a record which would give an overall perspective of levels and trends in all public land ownership adjustments. It would be readily available for analysis for policy purposes and for responding to inquiries. Uniform recording would decrease the cost required to extract the information for each request.

d. Disadvantages:

There would be increased cost of preparing the records, but it would be largely offset by the savings in cost of the less useable records displaced.

Alternative 1d.

Conduct and keep current an inventory of all public land by types of use.

a. Problems intended to resolve:

At the present time it is not possible to get an overall current perspective of the types of use being made of public lands or the trends in lands in different uses or combinations of uses.

b. Key features:

Standards would be established and land managing agencies would be required to inventory their lands identifying the acreage being used for specific single uses such as recreation and those used for various combinations of uses such as timber and water, grazing and water, grazing, water, and wildlife.

c. Advantages:

The inventory would provide helpful information for meaningful analysis and policy decisions on public lands.

Trends in use and the significance of changes in use could be more readily seen and policies more quickly adjusted to avert problems.

d. Disadvantages:

The initial survey and subsequent maintenance of such an inventory could be very costly depending upon the standard of refinement required. Costs could be minimized by electronic data processing.

Alternative 2.

That Federal land administering agencies develop inventory information on lands under their control, segregated as possible into those use categories for which the lands are most valuable.

a. Problems intended to resolve:

Since the origin of the multiple use concept for public lands, Federal agencies have tended to view all lands as having multiple uses, regardless of their actual nature. In fact, however, most public lands could be classified as to their best use, i.e., chiefly valuable for grazing domestic livestock, for timber production, for recreation, etc., at the present time, this information is not available so that future planning of uses for public lands cannot be done.

b. Key features:

This inventory information should be developed for all public lands and should show acreages of lands classified as being chiefly valuable for:

- a. Grazing domestic livestock
- b. Wildlife habitat
- c. Timber production
- d. Unique natural features
- e. Preservation as having historic value
- f. Intensive agriculture
- g. Urban development
- h. Winter sports
- i. Other recreation and environmental characteristics as criteria for them are developed
- j. Other uses that are unique

c. Advantages:

If information of this nature were available, public land administering agencies could allocate funds between areas using such an inventory as a basis to determine needs. Other valuable uses for this information include planning for urban expansion, location of roads, power lines, etc., and identifying those lands that should be disposed of as well as facilitating overall land use planning.

d. Disadvantages:

Additional land classification would have to be done at the field level. Agencies generally know where their various categories of land are but have not specifically identified them by delineating and planimetering to determine area. Some additional cost would no doubt be incurred for this intensive site classification.

Finally, good classification criteria have not been developed for some uses and would require additional study.

Alternative 2a.

That Federal land administering agencies not only inventory their lands to determine their most valuable use, but also assess them for their maximum productivity level which would be economically feasible to attain.

This alternative is essentially the same as the parent alternative but adds the element of productivity.

a. Advantages:

Although information on extent and present use is available for most natural resources, little or no information is available on the potential value of these resources under different levels of investment and management. In the future, information of this nature will be invaluable as present supplies diminish and agencies must allocate funds to those lands that will yield the greatest return. For example, if the potential productivity of public land watersheds were known, many states would be in a better position to plan future water resource development.

b. Disadvantages:

Much of this type of information is presently unknown and would have to be developed. As a result, it would take time and additional funds to develop such information.

Alternative 3.

Establish and maintain an inventory of environmental improvement opportunities which have been evaluated under established criteria applicable to all agencies.

a. Problem intended to resolve:

Federal agencies have no inventory of environmental problems existing on the public lands and no common scheme of evaluating and ranking possible projects for designing environmental programs.

While the agencies know what is bad for the environment they do not know how much of each type of work they have or the comparative benefits which could be achieved by each project or type of improvement.

b. Key feature:

All agencies would be required to initiate and maintain an inventory of environmental improvement projects evaluated on the basis of uniform standards and criteria applicable to all agencies. Such criteria would determine a ranking of the projects according to their estimated net benefits.

c. Advantage:

This would fill a definite gap in resource information needed for effective and meaningful environmental improvement program planning and budgeting.

d. Disadvantage:

The inventory and evaluation would be an added cost but it is believed essential for effective programming. The criteria established for evaluation of net benefits could function to limit detailed consideration of marginal and submarginal projects which are beyond expected budget levels.

Alternative 4.

Complete the initial public land surveys and resurveys within 10 years.

a. Problem intended to resolve:

The public land surveys are basic to the administration, management and protection of public land, still there are thousands of miles where the initial survey has not been made and thousands of miles where the lines and monuments have been obliterated. The need for this work is becoming more critical because of increased population pressures and more intensive management.

b. Key feature:

The initial surveys, resurveys and remonumentation surveys would be programmed for completion within 10 years.

c. Advantages:

The surveys and resurveys would establish the definite boundaries of public land and decrease the chance of trespass of others onto public land by mistake. It would enable accelerated selection of land granted to states as all selected land must be surveyed. Accelerating state selection would also avoid delay in the improvement of public land pending state selection.

d. Disadvantage:

The cost of completing the surveys would be substantial.

Alternative 5.

That the present BLM system of land ownership status records on public domain land be replaced with an electronic data processing system to facilitate Federal resource management decisions.

a. Problems intended to resolve:

At the present time, if an individual or Federal agency has a difficult case involving the ownership status and/or

any mineral claims or other reservations on a tract of land, the BLM may have to search through as many as five separate sources. This is especially true in the eastern half of the country. Tract books for some states are very old and as a result have brittle pages and illegible writing. The system is very inefficient because the work has to be done by hand, and results in a backlog of work which further delays acquisition of the information. If a decision on some land use is pending and time is of any importance, this information simply cannot be rapidly obtained.

b. Key features:

A new data processing system should be developed which will allow most of the resource and legal information on any subdivision of land (which could vary with the intensity of management) to be accumulated and updated on a regular basis. This would allow the land administrator to quickly determine any and all uses, leases and other information on any tract of land. The codes for this information could use actual legal subdivision terminology so that information could be determined on any size tract from the smallest subdivision on up to a whole township, if necessary.

c. Advantages:

A system of this type could serve not only to determine use and ownership but agencies could use it to record data on investments, surveys, as well as using it as a tool for planning. In addition, BLM could use it to answer the many requests it receives on reserved mineral interests and other legal questions which presently take a great deal of their time. Finally, the pages of the old original tract books are becoming very brittle and illegible so that BLM is having to laminate the pages in many of these books in plastic to protect them from further deterioration. After the new ADP system was operational, these old books could be retired to the archives to be used only where intensive study was necessary.

d. Disadvantages:

Any system of this nature would be very expensive but it could be implemented incrementally in areas where activity is greatest and extended to other areas as funds allowed. A great deal of time would be required to transfer the information from the old records to the punch cards or tape and check it for accuracy. In addition, there are some aspects of these records, such as the maps and survey description, that do not lend themselves to data processing and would have to be handled in some other way.

Alternative 6.

That Federal land administering agencies be required to inventory and rank resource development opportunities on the basis of marginal costs and benefits.

a. Problem intended to resolve:

Most agencies have failed to establish any inventory of resource development projects which have been objectively evaluated and ranked according to the net benefits. For example, no agencies have made an inventory of projects to improve the environment and establish criteria for selecting the projects which would be most effective. Most agencies have not inventoried and evaluated their opportunities for improvement in water yield, timber growth, recreation use, forage, and wildlife to determine the extent and effectiveness of the marginal projects in programs of different budget levels.

b. Key feature:

All agencies would be required to evaluate all resource development projects to assure that they produce at least some specified level of benefit based upon marginal

evaluation in accordance with established uniform standards and criteria.

c. Advantages:

This requirement would enable a more precise determination of the magnitude of resource problems and opportunities facing the land managing agencies. It would indicate the most effective allocation of funds to the various resource development opportunities at any given budget level.

d. Disadvantages:

It may be difficult to establish the value of benefits in some projects where these are not clearly an economic value. In any event values can be inputed and uniformly applied for project evaluation and ranking purposes.

The cost of inventorying and evaluating projects would be considerable but would be offset by more effective allocation and use of public funds.

Some agencies may lack the personnel and skills required for the evaluation of projects. This could be corrected with training and use of detailed instructions and guides.

Alternative 7.

That a Government-wide recreation reporting procedure be designed to give a more meaningful, accurate and consistent measure of recreation resource potential and critical aspects of recreation use.

a. Problems intended to resolve:

Not only does the concept and accuracy of recreation data reporting vary widely from agency-to-agency, but no

current measure of recreation use or recreation resource potential is adequate to provide guidance to administration and to evaluate program effectiveness.

b. Key features:

A new system should be designed to first identify the essential characteristics of recreation resource potential and recreation use. In addition, it should formulate units of measure that realistically reflect these characteristics and provide new techniques for recording, transmitting, storing, analyzing, and reporting initial observations. Finally, some provision should be made for monitoring the system before it is implemented.

c. Advantages:

Implementation of such a system would provide public land administering agencies with meaningful information that could be used in program planning and budgeting for recreation. In addition, impacts of recreation and future needs in specific areas could be more accurately assessed.

d. Disadvantages:

Additional expenditures would no doubt be required to develop and implement such a system. Since measures have not been developed, additional research and time would also be required.

OTHER PUBLIC LAND LAW REVIEW COMMISSION
STUDY REPORTS AVAILABLE

From the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402

Digest of Public Land Laws. Prepared by Shepard's Citations, Inc., of Colorado Springs, Colorado. 1968. \$6.50

History of Public Land Law Development. Written by Professors Paul Wallace Gates of Cornell University and Robert W. Swenson of the University of Utah. 1968. \$8.25

* * * * *

From the Clearinghouse for Federal Scientific and Technical Information, United States Department of Commerce, Springfield, Virginia 22151

Clearinghouse prices for these reports are based upon the number of volumes into which each report is divided, indicated for each report in the following listing. Price: \$3.00 per volume for paper printouts; \$0.65 per volume for microfiche.

Federal Legislative Jurisdiction. Prepared by the Land and Natural Resources Division, United States Department of Justice. Revised September 1969. One volume. Order number P B 185 920.

Study of Withdrawals and Reservations of Public Domain Lands. Prepared by Charles F. Wheatley, Jr. Revised September, 1969. Order numbers: P B 187 002, P B 187 003, P B 187 004.

Administrative Procedures and the Public Lands. Prepared by The University of Virginia, School of Law. Revised September, 1969. One volume. Order number: P B 187 205.

Fish and Wildlife Resources on the Public Lands. Prepared by the Department of Fishery and Wildlife Biology, Colorado State University. Revised September, 1969. Two volumes. Order number: P B 187 246, P B 187 247.

Public Land Timber Policy. By George Banshaf & Company, Milwaukee, Wisconsin. Published in four volumes, Nos. PB 187 728, PB 187 729, PB 187 730, PB 187 731..

Federal Public Land Laws and Policies Relating to Intensive Agriculture. Resources portion by South Dakota State University. Legal portion by Kronick, Moskovitz, Tiedemann & Girard, Sacramento, California. Published in four volumes. Legal portion, Volume I, No. PB 188071; resources portion, Volumes II, III, and IV, Nos. PB 188 062, PB 188 063, PB 188 064.

Development, Management and Use of Water Resources on the Public Lands. By Charles F. Wheatley, Jr. Washington, D.C., Charles E. Corker of the University of Washington, Thomas M. Stetson, San Francisco, California, and Daniel J. Reed, Los Angeles, California. Published in two volumes, Nos. PB 188 065, PB 188 066.

Outer Continental Shelf Lands of the United States. By Nossaman, Waters, Scott, Krueger and Riordan, Los Angeles, California. Published in six volumes, Nos. PB 188 714, PB 188 715, PB 188 716, PB 188 717, PB 188 718, PB 188 719.

The Forage Resource. By The University of Idaho, Moscow, Idaho. Published in four volumes, Nos. PB 189 249, PB 189 250, PB 189 251, PB 189 252.

Regional and Local Land Use Planning. By Herman D. Ruth & Associates, Berkeley, California. Published in four volumes, Nos. PB 189 410, PB 189 411, PB 189 412, PB 189 413.

Study of the Impact of Public Lands on Selected Regional Economies. By Consulting Services Corporation, Seattle, Washington. Revised November 15, 1969. Published in one volume, No. PB 190 164.

Land Grants to States. By Commission Staff. Published in one volume, No. PB 191 879.

State Land Resources and Policies. By Commission Staff. Published in one volume, No. PB 192 452.

Appraisal Techniques and Procedures Utilized in Connection with Actions Related to Federal Public Lands, by Kronick, Moskovitz, Tiedemann & Girard, Sacramento, California. Published in one volume, No. PB 193 529.

Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225

